**OKLAHOMA**
Health Care Authority

# SoonerCare Section 1115 Waiver Evaluation

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*INTERIM EVALUATION*
*DEMONSTRATION YEARS 24 – 26 (CY 2019 – 2021)*

*Prepared by the Pacific Health Policy Group for:*

*State of Oklahoma*
*Oklahoma Health Care Authority*

MAY 2023

# INDEPENDENT EVALUATION

The independent evaluation of the SoonerCare Demonstration was conducted by The Pacific Health Policy Group (PHPG). PHPG is solely responsible for the analysis and findings presented in this report.

PHPG wishes to acknowledge the cooperation of the Oklahoma Health Care Authority in obtaining the necessary data for completion of the evaluation. PHPG also wishes to acknowledge the contributions of the OHCA's (CAHPS®) surveyor, Health Management Program vendor and Health Access Networks in providing data for the evaluation.

# TABLE OF CONTENTS

## COMMONLY-USED ABBREVIATIONS & ACRONYMS

| | |
|---|---|
| ABD | Aged, Blind, Disabled |
| AHRQ | Agency for Healthcare Quality and Research |
| BRFSS | Behavioral Risk Factor Surveillance System |
| CAHPS | Consumer Assessment of Healthcare Providers and Systems |
| CEM | Coarsened Exact Matching |
| CMS | Centers for Medicare and Medicaid Services |
| FPL | Federal Poverty Level |
| HAN | Health Access Network |
| HMP | Health Management Program |
| IO | Insure Oklahoma |
| IO-ESI | Insure Oklahoma – Employer Sponsored Insurance |
| IO-IP | Insure Oklahoma – Individual Plan |
| ITS | Interrupted Time Series |
| MCO | Managed Care Organization |
| MEG | Medicaid Eligibility Group |
| MMIS | Medicaid Management Information System |
| NCQA | National Committee for Quality Assurance |
| NHIS | National Health Interview Survey |
| OHCA | Oklahoma Health Care Authority |
| OSU | Oklahoma State University |
| OU | Oklahoma, University of |
| PCCM | Primary Care Case Management |
| PCMH | Patient Centered Medical Home |
| PCP | Primary Care Provider |
| PHCC | Partnership for Healthy Central Communities |
| PHE | Public Health Emergency |
| PMPM | Per Member Per Month |
| SDOH | Social Determinants of Health |

## A. EXECUTIVE SUMMARY

### Introduction

Medicaid is the largest health insurer in the state of Oklahoma. In December 2021, the program provided coverage to over 1,175,000 Oklahomans, out of a total population of approximately four million (29 percent). In 2020 (the most recent year available), the program covered approximately 28,000 births out of 50,000 statewide (56 percent).

The Oklahoma Health Care Authority (OHCA), Oklahoma's Single State Agency for Medicaid, administers SoonerCare, the State's Section 1115(a) Research and Demonstration waiver (11-W-00048/6). The Demonstration originally was approved to begin operations in January 1996 and has continued through multiple renewal periods. The findings presented in this interim evaluation report are for Demonstration Years 24 – 26 (January 1, 2019 – December 31, 2021).

### SoonerCare Choice Program

The OHCA's overarching goals for the SoonerCare Choice program are to meet the health care needs of Oklahomans through provision of high quality, accessible and cost-effective care.  During the evaluation period, the OHCA sought to achieve these goals through two beneficiary-centered initiatives: Health Access Networks (HANs) and the SoonerCare Health Management Program (HMP).

The Demonstration operates statewide under an enhanced Primary Care Case Management (PCCM) model in which the OHCA contracts directly with primary care providers to serve as patient centered medical homes (PCMHs) for SoonerCare Choice members. These providers serve as the foundation for both the HAN and HMP initiatives.

#### *SoonerCare Health Access Networks*

SoonerCare Health Access Networks are non-profit, administrative entities that work with affiliated providers to coordinate and improve the quality of care provided to SoonerCare Choice members. The HANs employ care managers to provide telephonic and in-person care management and care coordination to SoonerCare Choice members with complex health care needs who are enrolled with affiliated PCMH providers. The HANs also work to establish new initiatives to address complex medical, social and behavioral health issues. For example, the HANs have implemented evidence-based protocols for care management of Aged, Blind Disabled (ABD) members with, or at risk for, complex/chronic health conditions, as well as Temporary Assistance for Needy Families (TANF) and related members with asthma and diabetes, among other conditions.

The OHCA contracts with three HANs: University of Oklahoma (OU) Sooner HAN; Partnership for Healthy Central Communities (PHCC) HAN; and Oklahoma State University (OSU) HAN. The HANs began operations in 2010 with combined enrollment of approximately 25,000.  In December 2021, enrollment exceeded 300,000.

## SoonerCare Health Management Program

The SoonerCare Health Management Program (HMP) is an initiative under the Demonstration developed to offer care management to SoonerCare Choice members most at-risk for chronic disease and other adverse health events. The program is administered by the OHCA and is managed by a vendor selected through a competitive procurement. The program is authorized to operate statewide.

The SoonerCare HMP serves SoonerCare Choice beneficiaries ages four through 63 who have one or more chronic illness and are at high risk for adverse outcomes and increased health care expenditures. The program is holistic, rather than disease-specific, but prominent conditions of members in the program include asthma, cardiovascular disease, chronic obstructive pulmonary disorder, diabetes, heart failure and hypertension.

The SoonerCare HMP was implemented in 2008 and has evolved over time. Under its current model, registered nurse health coaches are embedded at primary care practice sites, where they work closely with practice staff and provide care coordination and health education to participating members.  Some health coaches are dedicated to a single practice with one or more providers while others are shared between multiple practice sites within a geographic area.  A smaller portion of SoonerCare HMP beneficiaries receive telephonic or in-home health coaching. Enrollment fluctuated during the current Demonstration period, rising from 4,864 in 2019 to 7,152 in 2020 before dropping back to 6,292 in 2021.

## HAN and HMP Service Areas

Exhibit ES-1 below identifies the counties with one or more HAN-affiliated PCMH providers in December 2021, as well as counties in which one or more HMP health coaches was embedded in a PCMH practice. Forty-five out of 77 counties had one or both programs in operation and serving beneficiaries at the conclusion of the three-year waiver period. (Map does not depict counties with telephonic-only HMP beneficiaries; PCMH program operates in all 77 counties.)

### Exhibit ES-1 – HAN and HMP Counties (December 2021)
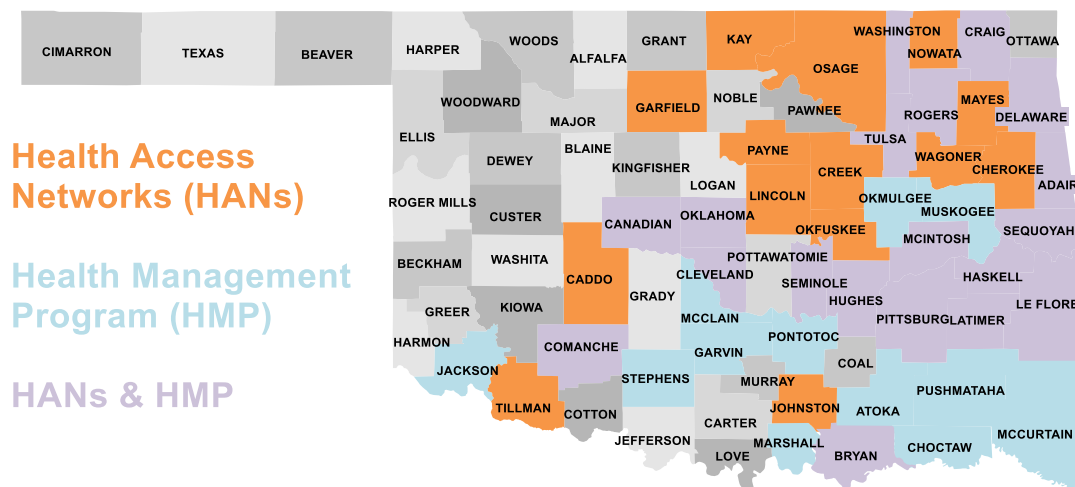
*Retroactive Eligibility*

The SoonerCare Demonstration also includes a waiver of retroactive eligibility for a portion of the SoonerCare population. The waiver has been a component of SoonerCare since the program's inception. At the start of the current Demonstration period, the population subject to the waiver was reduced, with several Medicaid Eligibility Groups (MEGs) becoming newly-eligible for retroactive coverage, leaving the Parent/Caretaker MEG as the primary group still subject to the waiver.

# Evaluation Scope and Methodology

*Hypotheses and Measures*

The SoonerCare evaluation was organized around a series of hypotheses related to the OHCA's goals for the Demonstration. The hypotheses were tested through analysis of over 80 discrete performance measures (some with multiple components).

The evaluation was structured to isolate, as much as possible, the discrete impact of the HAN and HMP initiatives on program access, quality and cost effectiveness. This was accomplished by stratifying SoonerCare Choice members into three population segments for applicable measures: members enrolled with a SoonerCare HAN PCMH; members enrolled in the SoonerCare HMP; and other SoonerCare Choice members (comparison group). Similarly, for the retroactive eligibility portion of the evaluation, members were stratified into two groups: those subject to the waiver and those receiving retroactive coverage.

Comparison group members were identified using a statistical technique known as coarsened exact matching (CEM). The CEM analysis controlled for age, gender, aid category (ABD and other), place of residence (urban or rural) and (where applicable) health status.

The evaluation used a combination of analytical techniques, as determined by best available data and the presence or absence of a valid comparison group. The evaluation employed nationally-validated measures where appropriate, including: Healthcare Effectiveness Data and Information Set (HEDIS®) and Consumer Assessment of Healthcare Providers and Systems (CAHPS®) survey data. The HEDIS data set included population-level preventive care measures, as well as measures specific to five prevalent chronic conditions among HMP members and the portion of HAN membership receiving care management: asthma, coronary artery disease, chronic obstructive pulmonary disease, diabetes and hypertension. The HEDIS data set also included several behavioral health measures.

The evaluation used State-specific measures where a national measure did not exist (e.g., data on enrollment or PCMH status). HEDIS measures were calculated using administrative (paid claims) data extracted from the OHCA's Medicaid Management Information System (MMIS).

Exhibit ES-2 on the following page summarizes key evaluation hypotheses and measure types by evaluation domain.

*Exhibit ES-2 – Evaluation Hypothesis Areas and Measures*

| Hypothesis Area | Demonstration Population | | | |
|---|---|---|---|---|
| **Measure Count by Type** | **HAN (Total Population)** | **HAN (Care Managed Subgroup)** | **HMP** | **Retroactive Eligibility** |
| **Accessible Care** | | | | |
| HEDIS Preventive Care Measures | *2 measures* | *2 measures* | | |
| CAHPS Survey Access Measures | *2 measures* | | *2 measures* | *3 measures[1]* |
| Other (Qualitative) Measures | | | *1 measure* | *2 measures* |
| **High Quality Care** | | | | |
| HEDIS Chronic Care Measures | *17 measures* | *13 measures* | *15 measures* | |
| CAHPS Survey Quality of Care Measures | *6 measures* | | *6 measures* | |
| Other (Qualitative) Measures | *4 measures* | *1 measure* | *3 measures* | |
| **Cost Effective Care** | | | | |
| Utilization Measures (Paid Claims Analysis) | *2 measures* | *2 measures* | *3 measures* | |
| Per Member Per Month Expenditure Measure | *1 measure* | *1 measure* | *1 measure* | |

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[1] Retroactive eligibility survey included questions from several nationally-validated instruments, including CAHPS.

*COVID-19 Public Health Emergency*

The COVID-19 Public Health Emergency (PHE) substantially disrupted health care utilization patterns during two of the three years addressed in the interim evaluation. The use of treatment and comparison groups for the majority of measures helped to mitigate the impact of the PHE on findings, to the extent both populations were exposed to the same disruptions in care (e.g., unavailability of office appointments for routine care needs).

The suspension of Most Title XIX disenrollments during the PHE directly affected the portion of the retroactive eligibility evaluation related to enrollment continuity. Descriptive statistics are provided in the interim evaluation but no conclusions can be drawn for the period falling under the PHE.

*Medicaid Expansion*

On June 30, 2020, Oklahoma voters passed State Question 802, to expand Medicaid eligibility no later than July 1, 2021 to adults ages 19-64 whose income is 138 percent (133 percent with a five percent disregard) of the federal poverty level or lower.  The OHCA established a new Adult Medicaid Eligibility Group and began to accept applications in June 2021 for an enrollment effective date of July 1, 2021.  The expansion population was added to SoonerCare Choice in September 2021 through an amendment to the Demonstration.

The majority of evaluation measures report findings on an annualized basis and exclude beneficiaries who fail to meet continuous enrollment requirements. The expansion population therefore is not represented in the interim evaluation but will be a component of the summative evaluation.

## Evaluation Findings

*Comparison Group Measures*

Findings are presented below for the subset of measures evaluated using the comparison group methodology (Quantitative Measures). Results were calculated for each of the individual years of the evaluation and also were pooled to present a three-year average. The difference in results for "treatment" (HMP, HAN or persons subject to the retroactive eligibility waiver) and comparison groups then were tested for statistical significance ($p<0.05$). Three-year pooled results served as the basis for findings.

### Health Access Networks

Exhibit ES-3 below summarizes results for the SoonerCare HAN population in total. As it illustrates, the population in total was not favorably differentiated from the comparison group. This outcome was not surprising, as the great majority of the HAN population receives the same level of care management as other SoonerCare Choice members; both groups rely on their PCMH provider for primary care and specialist referrals. Although the HANs receive a monthly capitation for all members, the OHCA's expectation is that the funds will be targeted to care management of members with complex/chronic conditions.

#### Exhibit ES-3 - HAN (Total) Members versus Comparison Group

| DOMAIN/Research Area | Demonstration Population Outperformed Comparison Group | Comparison Group Outperformed Demonstration Population | No Statistically Significant Difference |
|---|---|---|---|
| HAN (TOTAL) – Access to Care | | ●● | ●● |
| HAN (TOTAL) – Quality of Care | ●●●● ●● | ●●●● ● | ●●●● ●●●● ●●●● |
| HAN (TOTAL) – Cost Effectiveness | | ●● | ● |

To isolate the impact of the HANs on members with the greatest needs, PHPG obtained records of the subset receiving care management during the Demonstration period. This averaged about 4,000 members per year. The same measures were evaluated, except in cases where the population size was too small to produce reliable results.

Exhibit ES-4 below summarizes results for the SoonerCare HAN Care Managed population. The Care Managed population showed more favorable differentiation from its comparison group than did the HAN population in total[2].

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[2] Each "treatment" group is matched to a unique comparison group. That is, the HAN total comparison group is not identical to the HAN Care Managed comparison group.

### *Exhibit ES-4 - HAN (Care Managed) Members versus Comparison Group*

| DOMAIN/Research Area | Demonstration Population Outperformed Comparison Group | Comparison Group Outperformed Demonstration Population | No Statistically Significant Difference |
|---|---|---|---|
| **HAN (CARE MANAGED) – Access to Care** | ● ● | | |
| **HAN (CARE MANAGED) – Quality of Care** | ● ● ● ● | | ● ● ● ●<br>● ● ● ●<br>● |
| **HAN (CARE MANAGED) – Cost Effectiveness** | ● | ● | ● |

## *Health Management Program*

Exhibit ES-5 below summarizes results for the SoonerCare HMP population. As it illustrates, the population was favorably differentiated from the comparison group on a majority of measures.

### *Exhibit ES-5 - HMP Members versus Comparison Group*

| DOMAIN/Research Area | Demonstration Population Outperformed Comparison Group | Comparison Group Outperformed Demonstration Population | No Statistically Significant Difference |
|---|---|---|---|
| **HMP – Access to Care** | ● ● | | |
| **HMP – Quality of Care** | ● ● ● ●<br>● ● ● ●<br>● ● ● ● | ● ● | ● ● ● ●<br>● ● ● |
| **HMP – Cost Effectiveness** | ● ● ● ● | | |

*Retroactive Eligibility*

Exhibit ES-6 below summarizes results for the population subject to the retroactive eligibility waiver. As it illustrates, the population was favorably differentiated from the comparison group on both quantitative measures for which there was a statistically significant difference.

### *Exhibit ES-6 – Retroactive Eligibility Waiver Members versus Comparison Group*

| DOMAIN/Research Area | Demonstration Population Outperformed Comparison Group | Comparison Group Outperformed Demonstration Population | No Statistically Significant Difference |
|---|---|---|---|
| **RETROACTIVE ELIGIBILITY – Access to Care** | ● ● | | ● ● ● |

*Additional Analyses*

The Demonstration populations were stratified into urban and rural subgroups for measures with sufficient data to support a substate analysis. No pattern was observed; for some measures the urban subgroup outperformed the rural subgroup and for others the rural subgroup outperformed the urban.

The SoonerCare HAN and HMP programs existed in the prior three-year Demonstration period, and a subset of measures also was evaluated for the prior period, making available data for a six-year trend analysis. As with the urban/rural analysis, no consistent pattern was observed; some measures showed an upward trend while others either were flat or trended downward.

National data is available for a subset of HEDIS and CAHPS measures. Demonstration population results were compared to national benchmarks, defined as the 50th percentile of reporting states. In all instances, the SoonerCare rate exceeded the benchmark rate. (Caution: the benchmark population characteristics were not matched to Demonstration members to minimize differences in the populations. The data is presented in the body of the report for informational purposes only.)

## Summative Evaluation

The interim evaluation presents results for the first three years of the five-year Demonstration period. A portion of the three years overlapped with the COVID-19 PHE. Results should be treated as preliminary and subject to anomalies introduced by the PHE.

Findings for the summative evaluation will be reported following completion of the five-year Demonstration. The summative evaluation results will offer a more complete profile of the Demonstration's performance with respect to advancing the OHCA's goal of offering accessible, high quality and cost-effective care.

## B. GENERAL BACKGROUND INFORMATION

Medicaid is the largest health insurer in the state of Oklahoma. In December 2021, the program provided coverage to over 1,175,000 Oklahomans, out of a total population of approximately four million (29 percent). In 2020 (the most recent year available), the program covered approximately 28,000 births out of 50,000 statewide (56 percent)[3].

The Oklahoma Health Care Authority (OHCA), Oklahoma's Single State Agency for Medicaid, administers SoonerCare, the State's Section 1115(a) Research and Demonstration waiver (11-W-00048/6). The Demonstration originally was approved to begin operations in January 1996 and has continued through multiple renewal periods. The findings presented in this interim evaluation report are for Demonstration Years 24 – 26 (January 1, 2019 – December 31, 2021).

### 1. *Demonstration Goals and Issues to Address*

The OHCA's overarching goals for the SoonerCare Demonstration are to meet the health care needs of Oklahomans through provision of <u>high quality, accessible and cost-effective care</u>.

The SoonerCare Demonstration was implemented in 1996 to address concerns regarding access and quality of care in a fiscally prudent manner. In the period leading-up to the Demonstration, the State experienced an economic downturn and was forced to reduce benefits and provider reimbursement to meet its obligations under Title XIX.

Access and quality-of-care both suffered, as the number of participating providers declined and beneficiaries were forced to seek primary care in emergency rooms or, in the case of adults, forego care altogether due to benefit limits. The program also lacked any formal care management structure, leaving beneficiaries with chronic conditions to navigate the health care system on their own.

The State responded to this crisis through creation of a new Medicaid agency, the Oklahoma Health Care Authority (OHCA) and through development of the SoonerCare program under Section 1115 Demonstration authority. As described in more detail below, SoonerCare operates as a managed care system by contracting with Patient Centered Medical Homes (PCMH) and arranging for care management of high risk/high need members through Health Access Networks (HANs) and the SoonerCare Health Management Program (HMP).

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[3] Source for Medicaid enrollment and births is the Oklahoma Health Care Authority. Source for total population and births is US Census Bureau.

## 2. Demonstration Name and Timeframe

The SoonerCare Demonstration (Project Number 11-W-0048/6) was approved originally for a five-year period commencing on January 1, 1996[4]. The Demonstration has received multiple extensions since expiration of the original five-year authority.

On August 31, 2018, CMS granted a 64-month extension for the period August 31, 2018 – December 31, 2023. The OHCA is requesting another extension of the Demonstration, to begin on January 1, 2024.

In accordance with Section 1115 Demonstration Special Terms and Conditions, states requesting an extension must submit an Interim Evaluation of the program along with the extension application. This report constitutes the SoonerCare Interim Evaluation and addresses the first three years of the current extension period, from January 1, 2019 – December 31, 2021.

(Although the current extension formally began on August 31, 2018, many of the evaluation measures, such as those using Healthcare Effectiveness and Data Information Set (HEDIS®) specifications, are calculated on a calendar year basis. Data and findings for the months of September 2018 – December 2018 already were included in the Summative Evaluation report for the prior Demonstration period.)

## 3. Description of the Demonstration

The OHCA was established to oversee the program's transition to managed care and implement and administer the SoonerCare Demonstration. The program initially included children in mandatory Medicaid State Plan Medicaid Eligibility Groups (MEGs), pregnant women and Section 1931[5] low-income families. SoonerCare members were enrolled in "SoonerCare Plus" risk-based managed care organizations (MCOs) in the State's three largest metropolitan areas (Oklahoma City, Tulsa and Lawton), while members in the remainder of the State were enrolled in a primary care case management (PCCM) model. In its original design, the "SoonerCare Choice" PCCM model included a partial capitation payment to cover primary care services and office-based laboratory and radiology services.

The Oklahoma managed care environment was relatively immature in the program's early years. The OHCA faced ongoing challenges attracting a sufficient number of licensed health plans to ensure price competition and beneficiary choice in the metropolitan areas. In 2003, the OHCA discontinued SoonerCare Plus and expanded the SoonerCare Choice model statewide. The OHCA also modified the SoonerCare Choice model by transitioning to payment of a per member per

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[4] The Demonstration's formal name is "SoonerCare". However, Oklahoma uses the same title for its entire Medicaid program. To distinguish the populations, the Demonstration managed care model also is known as "SoonerCare Choice", while Medicaid beneficiaries not enrolled in managed care are referred to as "SoonerCare Traditional" and "SoonerPlan" (family planning benefits-only population).

[5] Refers to Section 1931 of the Social Security Act, which was added through the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 and created a new category of Medicaid eligibility for low-income parents. It requires states to cover at least those parents with incomes below 1996 state Aid to Families with Dependent Children (AFDC) income thresholds, regardless of whether they receive cash assistance.

month (PMPM) age-adjusted case management fee coupled with fee-for-service payment of medical claims.

The Demonstration has continued to evolve and expand significantly over the years. The program's covered populations and major components during the current evaluation period are described below. They include the core SoonerCare Choice program, Insure Oklahoma, Health Access Networks and the SoonerCare Health Management Program.

## Covered Populations (Populations Impacted by the Demonstration)

### *SoonerCare Choice*

At the outset of the evaluation period, the SoonerCare Demonstration covered children in mandatory state plan groups, pregnant women and Aged, Blind and Disabled (ABD) members who are not dually-eligible and not receiving long term care, as well as 1931 low-income families and IV-E Foster Care or Adoption Assistance children, the latter with voluntary enrollment. In accordance with Oklahoma Senate Bill 741, the OHCA also serves individuals in need of breast or cervical cancer treatment and children with disabilities addressed under the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA).

The Demonstration operates statewide under an enhanced Primary Care Case Management (PCCM) model in which the OHCA contracts directly with primary care providers to serve as patient centered medical homes for Title XIX SoonerCare Choice members. Patient centered medical home (PCMH) providers receive monthly care coordination payments for each beneficiary on their panels[6].

SoonerCare beneficiaries are not required to select a PCMH as a condition of eligibility. Beneficiaries are counted as part of SoonerCare Choice if and when they enroll with a PCMH.

### *Insure Oklahoma Premium Assistance Program*

The Oklahoma Legislature in 2004 passed SB 1546, authorizing the OHCA to develop a subsidized insurance program for qualifying employees of participating small businesses, and their spouses, as well as other qualifying low-income adults not eligible for Medicaid. The program, originally known as O-EPIC and later as Insure Oklahoma (IO), was approved by CMS as a Health Insurance Flexibility and Affordability (HIFA) waiver amendment in September 2005.

IO includes two participation tracks: Employer Sponsored Insurance (IO-ESI) and Individual Plan (IO-IP). Under IO-ESI, the OHCA pays a portion of the health insurance premium for qualifying employees at participating small businesses.

During 2019 and 2020, the program was open to qualifying Oklahomans with household incomes up to 200 percent of the federal poverty level, who worked at an eligible business enrolled in IO-ESI, and Oklahomans making between 48 percent and 100 percent of the federal poverty level who were unemployed, working disabled or had qualifying income (O-IP population).

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[6] The terms "member" and "beneficiary" are used interchangeably throughout the report.

Individuals in the IO-IP program, other than American Indians, were responsible for health insurance premiums up to four percent of their monthly gross household income. (In accordance with Oklahoma Administrative Code 317:45-9-4 and 317:45-11-24, American Indians providing documentation of tribal citizenship are exempt from premium payments.)

## Medicaid Expansion (July 2021)

On June 30, 2020, Oklahoma voters passed State Question 802, to expand Medicaid eligibility no later than July 1, 2021 to adults ages 19-64 whose income is 138 percent (133 percent with a five percent disregard) of the federal poverty level or lower. The OHCA established a new Adult Medicaid Eligibility Group and began to accept applications in June 2021 for an enrollment effective date of July 1, 2021.

The OHCA also transitioned automatically to Medicaid those Insure Oklahoma enrollees who qualified for Medicaid under the expansion[7]. The transition included all IO-IP enrollees and the portion of the IO-ESI population with incomes below 138 percent of FPL. Insure Oklahoma continues to provide coverage to persons with incomes between 138 and 200 percent of FPL enrolled in the IO-ESI portion of the program[8].

The expansion population was added to SoonerCare Choice in September 2021 through an amendment to the Demonstration. Like other SoonerCare beneficiaries, expansion beneficiaries are not required to select a PCMH as a condition of eligibility. Beneficiaries are counted as part of SoonerCare Choice if and when they enroll with a PCMH.

The majority of evaluation measures report findings on an annualized basis and exclude beneficiaries who fail to meet continuous enrollment requirements. The evaluation population therefore is not represented in the interim evaluation but will be a component of the summative evaluation.

## COVID-19 Public Health Emergency (March 2020)

The COVID-19 pandemic was declared a national public health emergency (PHE) on March 13, 2020. In response, Congress on March 18, 2020 enacted HR 6201, the Families First Coronavirus Response Act, which the President signed into law on the same day.

Section 6008 of the Act provided for a temporary increase in the Medicaid Federal Medical Assistance Percentage (FMAP). The higher FMAP was contingent on the suspension of involuntary disenrollment from Medicaid under most circumstances, until the end of the emergency.

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[7] IO members who are eligible for Medicaid solely due to the suspension of disenrollments under the COVID-19 PHE remain in the IO program pending cessation of the PHE.

[8] The approved evaluation design includes a domain for Insure Oklahoma, with three enrollment-related measures. The formal evaluation measures are omitted from the report, in recognition of the program's planned discontinuation. Enrollment data instead is included in this section for informational purposes only.

This provision had a significant impact on Medicaid enrollment nationally, including in Oklahoma, which received approval for its initial Section 1135 waiver application[9] on March 24, 2020. It also had implications for the retroactive eligibility component of the SoonerCare Demonstration evaluation, as discussed in Section F (Results).

### *Title XIX Populations not Covered under the Demonstration*

The SoonerCare Demonstration covers the majority of Oklahoma Medicaid beneficiaries but does not encompass the entire program. There are two non-Demonstration categories: SoonerCare Traditional and SoonerPlan. The SoonerCare Traditional population includes Medicare-Medicaid beneficiaries, long-term care beneficiaries and several smaller MEGs; it also includes persons eligible for the Demonstration who have not enrolled with a PCMH.  SoonerPlan includes persons receiving family planning services only.

### *Enrollment Trends*

Oklahoma Medicaid enrollment grew substantially during the period covered by the evaluation, both as a result of the Medicaid expansion and the suspension of most involuntary disenrollments during the COVID-19 PHE. Overall, the SoonerCare Choice population grew in size from 525,486 in January 2019 to 775,077 in December 2021 (47.5 percent increase).

The IO population grew from 18,754 in January 2019 to a peak of 40,867 in June 2021, before implementation of Medicaid expansion. IO enrollment in December 2021 was down to 10,576.

Exhibit B – 1 on the following page depicts monthly enrollment for the SoonerCare Choice and IO populations from January 2019 to December 2021[10].

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[9] This waiver type is being used by CMS to grant states flexibilities in responding to the PHE.
[10] Source for Exhibits B-1 and B-2: OHCA monthly enrollment reports. https://oklahoma.gov/ohca/research/fast-facts-archives.html

### Exhibit B-1 – SoonerCare Choice and Insure Oklahoma Population Monthly Enrollment
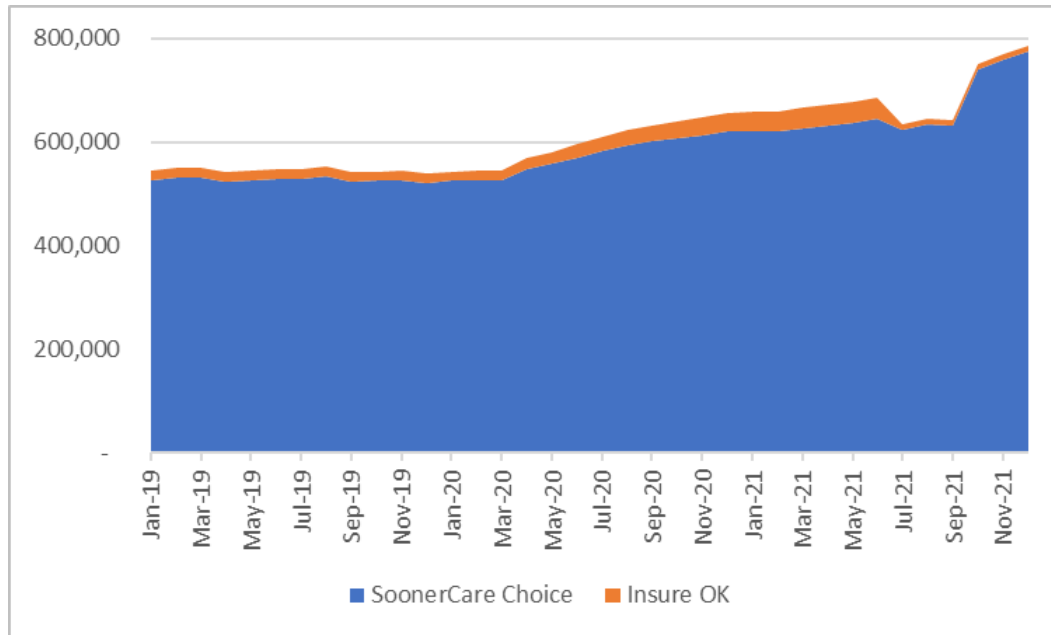


Exhibit B – 2 below presents enrollment numbers and percentages for the total SoonerCare program (all MEGs) in January 2019 and December 2021. The SoonerCare Traditional population includes Medicare-Medicaid dual eligible beneficiaries, long term care recipients and several smaller MEGs. It also includes persons who are eligible to select a PCMH but who have not yet done so.[11]

### Exhibit B-2 – Enrollment Distribution – All SoonerCare

| Population | January 2019 Enrollment | Percent of Total | December 2021 Enrollment | Percent of Total |
|---|---|---|---|---|
| **SoonerCare Choice** | 525,486 | 67.7% | 775,077 | 65.9% |
| **Insure Oklahoma** | 18,754 | 2.4% | 10,576 | 0.9% |
| *Sub-Total Managed Care* | *544,240* | *69.1%* | *785,653* | *66.8%* |
| **SoonerCare Traditional** | 231,784 | 29.9% | 390,014 | 33.2% |
| **Total** | **776,024** | **100.0%** | **1,175,667** | **100.0%** |

There were 231,046 Medicaid expansion beneficiaries in December 2021. They are included within the SoonerCare Choice and SoonerCare Traditional categories, based on their PCMH status.

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[11] Oklahoma also offers a family planning-only benefit to qualifying post-partum women ("SoonerPlan program"). SoonerPlan enrollment is not included in the exhibit.

## SoonerCare Service Delivery and Care Management Models

The SoonerCare Demonstration offers all beneficiaries the opportunity to select a medical home for primary care and management of other medical and social needs. A portion of these medical homes are aligned with Health Access Networks (HANs) that provide practice support and care management to certain beneficiaries with, or at risk for, complex/chronic health conditions.

The OHCA also operates the SoonerCare Health Management Program, which provides care management to certain beneficiaries with, or at risk for, complex/chronic health conditions whose medical homes are not aligned with a HAN.

The Demonstration delivery models are described in more detail below.

## Patient Centered Medical Homes

In January 2009, the OHCA enhanced the existing PCCM system through introduction of a Patient Centered Medical Home model for SoonerCare Choice beneficiaries. Under this model, beneficiaries actively choose a medical home from a network of contracted primary care providers. (PCMH contracts are offered to all Medicaid-enrolled primary care providers.)

In most counties, there is at least one PCMH provider for every 500 beneficiaries. Exhibit B – 3 below presents Member-to-PCMH ratios by county as of June 2022.

### Exhibit B-3 – Member-to-PCMH Ratios by County
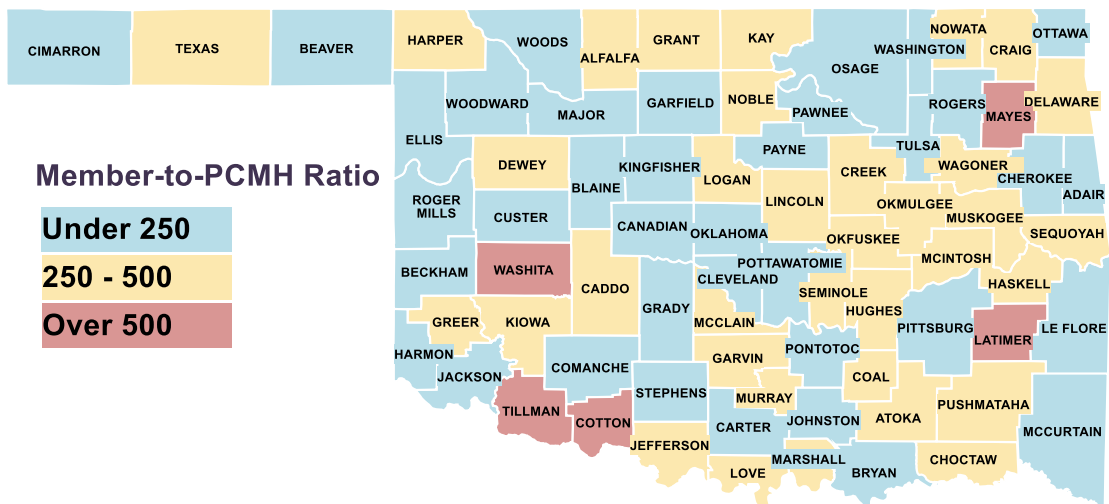
There are three PCMH participation levels, or "tiers": entry level, advanced and optimal. All three tiers include standards for care management, quality improvement and access, with the standards becoming more stringent in the higher tiers. For example, entry level medical homes must provide at least 20 hours of office time per week, while advanced medical homes must offer at least 30 hours and optimal medical homes must offer at least 30 hours plus four hours of evening or weekend availability.

Medical homes are paid monthly care coordination payments for each beneficiary on their panel. The payments vary by practice type (children only, adults only or children and adults) and tier. In 2022, the fees ranged from $3.63 to $8.82 per member per month (see Exhibit B-4 below). (Tribal and FQHC providers receive distinct payments that are not age- or tier-based.) Providers also are eligible to receive "SoonerExcel" payments for meeting pre-defined quality targets.

### *Exhibit B-4 - PCMH Payments by Practice Type and Tier (PMPM)*

| Practice Type | Entry Level | Advanced | Optimal |
|---|---|---|---|
| **Adults Only** | $5.08 | $6.63 | $8.82 |
| **Children and Adults** | $4.39 | $5.73 | $7.61 |
| **Children Only** | $3.63 | $4.73 | $6.28 |

## Health Access Networks

SoonerCare Health Access Networks are non-profit, administrative entities that work with affiliated providers to coordinate and improve the quality of care provided to SoonerCare Choice members. The HANs receive a nominal $5.00 per member per month (PMPM) payment[12].

The SoonerCare Special Terms and Conditions specify that each HAN must:

- Be organized for the purpose of restructuring and improving the access, quality, and continuity of care to SoonerCare beneficiaries;
- Ensure patients access to all levels of care, including primary, outpatient, specialty, certain ancillary services, and acute inpatient care, within a community or across a broad spectrum of providers across a service region or the State;
- Submit a development plan to the State detailing how the network will reduce costs associated with the provision of health care services to SoonerCare enrollees, improve access to health care services, and enhance the quality and coordination of health care services to SoonerCare beneficiaries;
- Offer core components of electronic medical records, improved access to specialty care, telemedicine, and expanded quality improvement strategies; and,
- Offer care management/care coordination to persons with complex health care needs as specified in the state-HAN provider agreement.

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[12] The HANs pay a portion of the state match, and are capped on the number of beneficiaries for which they can be paid the fee, making the average effective payment less than $5.00.

Most SoonerCare HAN members receive care coordination, if needed, through their HAN-affiliated PCMH provider. In this respect, they do not differ from other members enrolled with a non-HAN PCMH.

The HANs each employ care managers (primarily registered nurses) to assist members with, or at risk for complex or chronic health care needs, such as asthma or diabetes. Candidates for care management may be identified through analysis of paid claims data, electronic health record reviews or provider referrals. Care management can be telephonic or in-person and can encompass both clinical and social service needs.

The OHCA contracts with three HANs: University of Oklahoma (OU) Sooner HAN; Partnership for Healthy Central Communities (PHCC) HAN; and Oklahoma State University (OSU) HAN. The HANs began operations in 2010 with combined enrollment of approximately 25,000. In December 2021, enrollment exceeded 300,000.

The two larger HANs are affiliated with universities and originated in Tulsa. They both gradually expanded geographically during the waiver period by adding new practices outside of their initial service areas. Most of the expansion was to the east and south. Central Communities is a grassroots organization based in Canadian County, which is to the west of Oklahoma City.  Exhibit B-5 below presents HAN service areas by county.

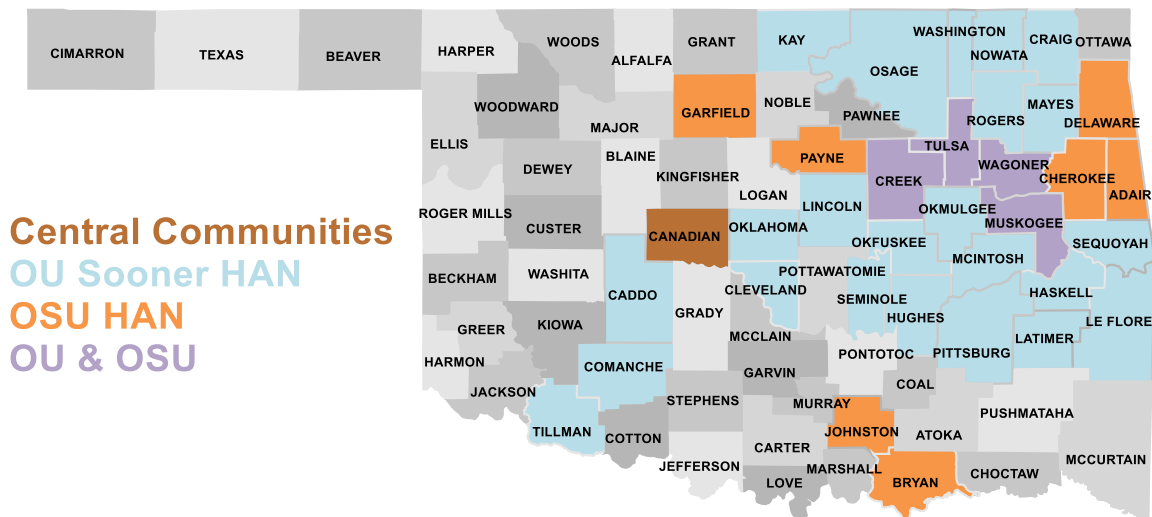*Exhibit B-5 – HAN Service Areas by County*



Exhibit B-6 on the following page presents total HAN enrollment by year, as well as enrollment for the cohort receiving care management. (Some members received care management across two or more years.)

*Exhibit B-6 – HAN Enrollment by Year[13]*

| Enrollment Type | 2019 | 2020 | 2021 |
|---|---|---|---|
| **Total** | 156,853 | 194,805 | 312,855 |
| **Care Managed** | 3,037 | 3,511 | 4,192 |

## SoonerCare Health Management Program

The SoonerCare Health Management Program (HMP) is an initiative under the Demonstration developed to offer care management to SoonerCare Choice members most at-risk for chronic disease and other adverse health events. The program is administered by the OHCA and is managed by a vendor selected through a competitive procurement. The program is authorized to operate statewide.

The SoonerCare HMP serves SoonerCare Choice beneficiaries ages four through 63 who have one or more chronic illness and are at high risk for adverse outcomes and increased health care expenditures. The program is holistic, rather than disease-specific, but prominent conditions of members in the program include asthma, cardiovascular disease, chronic obstructive pulmonary disorder, diabetes and hypertension.

The SoonerCare HMP was implemented in 2008 and has evolved over time. During its first five years, individuals were stratified into two levels of care, with the highest-risk segment placed in "Tier 1" and the remainder in "Tier 2."  Prospective participants were contacted and "enrolled" in their appropriate tier.  After enrollment, participants were "engaged" through initiation of care management activities. Tier 1 participants received face-to-face nurse care management while Tier 2 participants received telephonic nurse care management.  The OHCA sought to provide services at any given time to about 1,000 members in Tier 1 and about 4,000 members in Tier 2.

As the contractual period for the first generation SoonerCare HMP was nearing its end, the OHCA began the process of examining how the program could be enhanced for the benefit of both members and providers. The OHCA observed that a significant amount of the nurse care managers' time was being spent on outreach and scheduling activities, particularly for Tier 1 participants.  The OHCA also observed that nurse care managers tended to work in isolation from primary care providers, although coordination did improve somewhat in the program's later years, as documented in provider survey results.

To enhance beneficiary identification and participation, as well as coordination with primary care providers, the OHCA elected to replace centralized nurse care management services with registered nurse health coaches embedded at primary care practice sites. The health coaches would work closely with practice staff and provide coaching services to participating members. Health coaches either could be dedicated to a single practice with one or more providers or shared between multiple practice sites within a geographic area. This change took effect with implementation of the "second generation" SoonerCare HMP in 2013.

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[13] Combined enrollment for all three HANs. Count reflects members enrolled for the entire calendar year, consistent with the methodology used for analysis of HEDIS measures.

In addition to health coaching, the SoonerCare HMP incorporates Practice Facilitation into each location with an embedded health coach. A practice facilitator nurse assesses the office's existing processes related to care of patients with chronic conditions. The practice facilitator then undertakes education and academic detailing appropriate to the office's needs before deployment of the health coach. Practice facilitators also in some cases provide assistance to practices without embedded health coaches.

In 2014, the OHCA authorized its vendor to resume telephonic case management (health coaching) and, in limited cases, care coordination in members' homes. Telephonic health coaches would focus their efforts on engaging new members, actively pursuing members needing assistance with care transitions and serving high risk members not assigned to a primary care provider with an embedded coach. The majority of health coaching would continue to occur through the embedded health coaches at provider offices.

The OHCA also implemented a Pain Management program within HMP in 2015. The OHCA authorized its vendor to hire practice facilitators and substance use resource specialists dedicated to improving the effectiveness of providers caring for members with chronic pain and opioid drug use. The Pain Management staff assist providers with implementation of a chronic pain management toolkit and principles of proper prescribing. These staff members work both with offices that have an embedded health coach and offices that do not.

In 2019, the OHCA entered into a new five-year contract with the HMP vendor. The contract promoted value-based purchasing concepts through payment withholds to be earned back by meeting quality-related performance benchmarks. The contract also allowed for program expansion under all three health coaching modalities.

Exhibit B-7 below identifies the counties with SoonerCare HMP office-embedded health coaches, practice facilitators or both. (Counties with telephonic-only care management are not highlighted.)

### *Exhibit B-7 – HMP On-Site Health Coaches and Practice Facilitators by County*
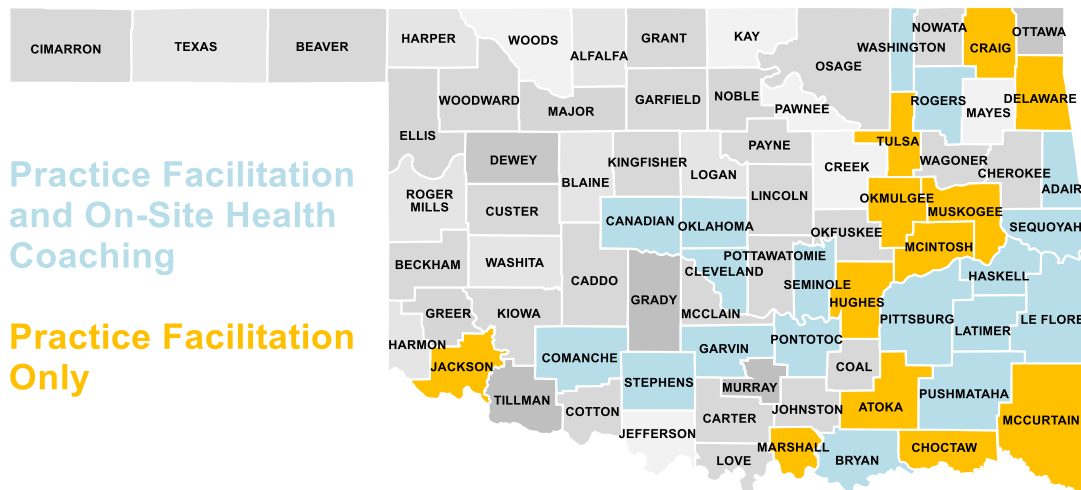
SoonerCare HMP enrollment fluctuated during the current Demonstration period. Enrollment in 2019 was 4,864. It grew to 7,152 in 2020 before dropping to 6,292 in 2021[14].  (Some members received care management across two or more years.)

## Summary of Major Events

Exhibit B – 8 below presents a timeline summarizing major events affecting enrollment and service delivery during the Demonstration.

### *Exhibit B-8 – SoonerCare Milestones*

| Year | Event |
| --- | --- |
| 1996 | Start of Demonstration |
| 2003 | All members transitioned to PCCM model |
| 2004 | Insure Oklahoma begins |
| 2008 | SoonerCare HMP begins |
| 2009 | PCMH model begins |
| 2010 | SoonerCare HANs begin |
| 2018 | Start of Current Demonstration Period |
| 2019 | HMP Value-Based Contract begins |
| 2021 | Medicaid Expansion and IO phase-out |

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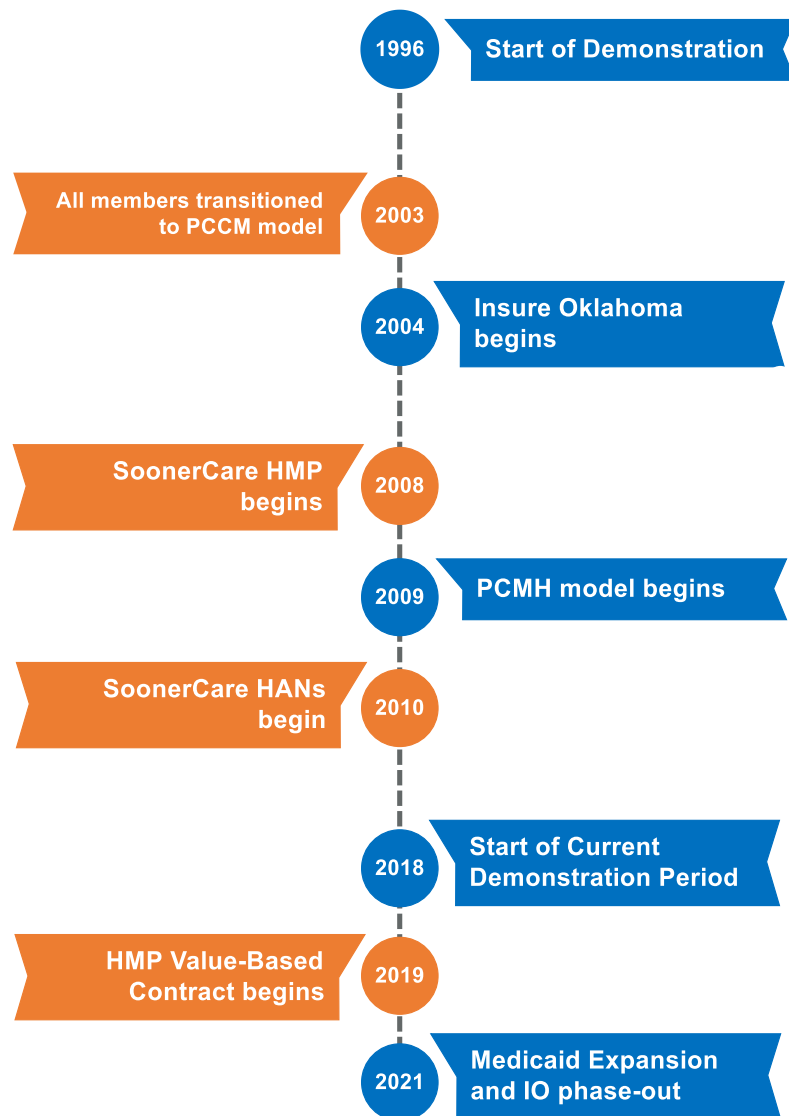
[14] Count of members enrolled in SoonerCare for the entire year (consistent with the methodology used for evaluation of HEDIS measures) and in SoonerCare HMP for at least three months of the year.

## Alignment of Care Management Initiatives

The OHCA's objective is to align PCMH, HAN, SoonerCare HMP and internal care management activities, such that all SoonerCare Choice members with complex/chronic conditions have access to care management. This is part of a broader strategy under the SoonerCare Demonstration to advance managed care principles and a statewide Quality Improvement Program through complementary initiatives.

Exhibit B-9 below identifies the counties in which the SoonerCare HMP, SoonerCare HAN or both programs operate. The SoonerCare HMP also provides telephonic care management to SoonerCare Choice members in other counties throughout the State.

### Exhibit B-9 – SoonerCare HAN and HMP Operations, by County
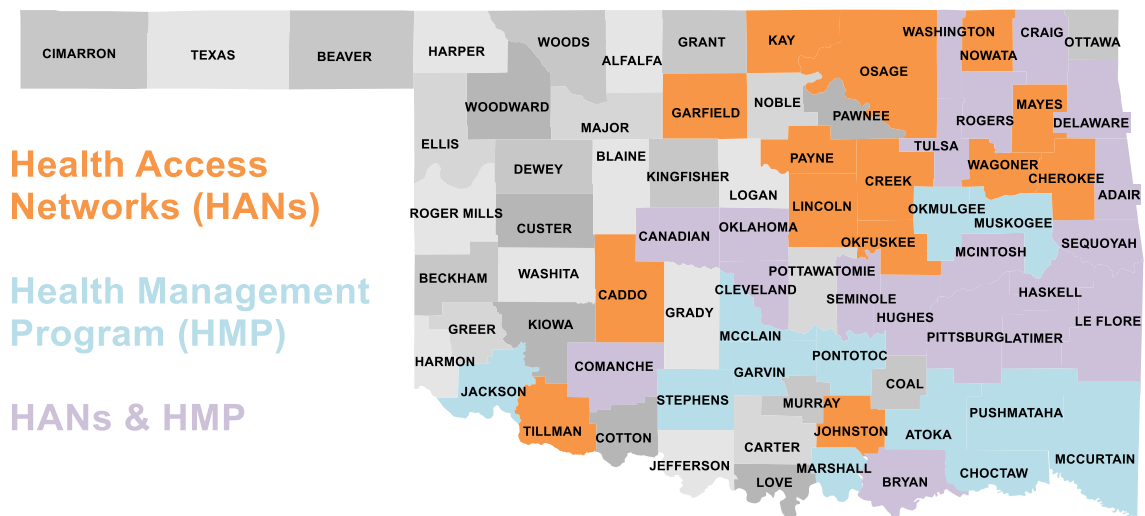


The evaluation includes questions and hypotheses related to the two major SoonerCare Choice care management systems. The evaluation design incorporates access, quality, health outcome and cost effectiveness measures relevant to each system.

As discussed further in the methodology section, the evaluation relies primarily on analysis of SoonerCare HMP and SoonerCare HAN performance against a comparison group selected from the non-HMP/non-HAN SoonerCare Choice population.

The SoonerCare HAN analysis presents results both for the HAN population at large ("HAN total") and the cohort receiving care management ("HAN Care Managed"). The HAN Care Managed subgroup is broken-out because the HAN total population is undifferentiated in its model-of-care from the non-HAN population.

## Retroactive Eligibility

The SoonerCare Demonstration also includes a waiver of retroactive eligibility for a portion of the SoonerCare population. The waiver has been a component of SoonerCare since the Demonstration's inception.

At the start of the current Demonstration period, the population subject to the waiver was reduced, with several groups becoming newly-eligible for retroactive coverage. Exhibit B-10 below identifies the status of populations subject to the waiver in the prior and current Demonstration periods. In the current period, no children or pregnant women are subject to the retroactive eligibility waiver.

*Exhibit B-10 – Demonstration Retroactive Eligibility Waiver Populations*

| Population | Subject to Waiver in Prior Demonstration Period | Subject to Waiver in Current Demonstration Period |
|---|---|---|
| Pregnant women and infants under 1 1902(a)(10)(A)(i)(IV) | *Yes* | *No* |
| Children 1 – 5 1902(a)(10)(A)(i)(VI) | *Yes* | *No* |
| Children 6 – 18 1902(a)(10)(A)(i)(VII) | *Yes* | *No* |
| IV-E Foster Care or Adoption Assistance children | *Yes* | *No* |
| 1931 low-income families | *Yes* | *Yes* |
| Targeted low-income child | *Yes* | *No* |
| Infants under age 1 through CHIP Medicaid expansion | *Yes* | *No* |
| Children 1 – 5 through CHIP Medicaid expansion | *Yes* | *No* |
| Children 6 – 18 through CHIP Medicaid expansion | *Yes* | *No* |
| Non-IV-E foster care children under age 21 in State or tribal custody | *Yes* | *No* |
| Non-disabled low-income workers and spouses ages 19 – 64 (IO IP) | *Yes* | *Yes* |
| Working disabled adults ages 19 – 64 (IO IP) | *Yes* | *Yes* |
| Full-time college students ages 19 – 22 (IO IP) | *Yes* | *Yes* |
| Foster parents ages 19 – 64 (IO IP) | *Yes* | *Yes* |
| Qualified employees of not-for-profit businesses ages 19 – 64 (IO IP) | *Yes* | *Yes* |

The retroactive eligibility evaluation also uses the comparison group method to evaluate the waiver's impact on enrollment patterns and health outcomes.

## 4. *Changes to the Demonstration*

The principal change to the Demonstration during the current period occurred through the expansion of Medicaid to adults ages 19-64 whose income is 138 percent (133 percent with a five percent disregard) of the federal poverty level or lower.  The expansion resulted in substantial growth to the Medicaid program.

Enrollment into the expansion MEG began in July 2021, six months prior to the end of the three-year period addressed in the interim evaluation. Expansion beneficiaries were offered the opportunity to select a PCMH provider under SoonerCare Choice starting in September 2021.

The majority of the measures in the evaluation design specify that an individual must be enrolled continuously for longer than six months to be included in the analysis. Except where noted in the report, the expansion population is not a component of the evaluation.

The summative evaluation report will include two complete years of data for the expansion population. The analysis will be stratified, as appropriate, to identify any differences between the expansion and traditional Medicaid populations.

## 5. *Population Groups Impacted by the Demonstration*

The Demonstration includes the majority of Oklahoma's Medicaid/CHIP population[15]. In addition to the groups identified in Exhibit B-10, the Demonstration includes the populations presented below in Exhibit B-11. These populations received retroactive eligibility during the period covered in the evaluation, as well as the prior Demonstration period.

As discussed, the expansion population is excluded from the interim evaluation, except where noted, due to its short period of enrollment.

### *Exhibit B-11 – Other Demonstration Populations*

| Population | FPL and/or other Qualifying Criteria |
| --- | --- |
| SSI recipients | Up to SSI limit |
| Pickle amendment | Up to SSI limit |
| Early widows/widowers | Up to SSI limit |
| Disabled adult children (DACs) | Up to SSI limit |
| 1619(b) population | SSI for unearned income and income limit |
| Aged, blind and disabled | From SSI up to and including 100% FPL |
| Eligible but not receiving cash assistance | Up to SSI limit |
| Individuals receiving only optional State supplements | 100% SSI FBR + $41 (SSP) |
| Breast and cervical cancer prevention and treatment | Up to and including 185% FPL |
| TEFRA children under 19 years of age without creditable coverage | Disabled according to SSA definition, with gross personal income at or below 200% FPL |
| New Adult Group (Medicaid Expansion) | Adults ages 19-64 whose income is 138 percent (133 percent with a five percent disregard) of the federal poverty level or lower |

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[15] The major exclusions are residents of long term care facilities, 1915c waiver recipients, persons dually-eligible for Medicare/Medicaid and persons receiving less than full Title XIX benefits.

## C. EVALUATION QUESTIONS AND HYPOTHESES

### 1. *Quantifiable Targets for Improvement*

The SoonerCare Demonstration's goals focus on improving access and quality of care, while controlling costs. The Demonstration seeks to accomplish these goals through advancement of managed care principles, including enhanced primary care and effective care management of members with, or at risk for, complex/chronic conditions. The Demonstration Special Terms and Conditions include questions and hypotheses selected to evaluate the program's performance in the three goal areas (Access, Quality and Cost Effectiveness).

The CMS-approved evaluation design identifies measures for each of the evaluation questions and hypotheses that can be expressed as numerical values and can be tracked on a longitudinal basis. The OHCA's target is to document improvement in the trendline, either upward or downward, depending on the specific measure.

The Driver Diagrams presented on the following page in Exhibits C-1 and C-2 illustrate the relationship between the OHCA's overall goals for SoonerCare Choice and the primary and secondary drivers for achieving these goals.

As depicted in the diagrams, the SoonerCare HAN and HMP care management programs serve as the platforms, or primary drivers, for achieving Demonstration aims with respect to access/quality (Exhibit C-1) and cost effectiveness (Exhibit C-2).

Both programs are supported by secondary drivers related to changes in preventive/primary care access, utilization of emergency room and inpatient services, provider payment systems and enrollment continuity (for beneficiaries who are subject to the retroactive eligibility waiver).

## Exhibit C-1 – Driver Diagram (Access and Quality)

**Secondary Drivers**

**Primary Drivers**

**Aim**

Improve access and quality of care

Enhanced primary care

- Increase in PCMH practices aligned with HANs
- Expansion of HMP support for PCMH practices

Expanded care management

- Increase in number of members care managed by HANs
- Increase in options for members to be care managed through the HMP
- Geographic expansion of HAN and HMP care management statewide

## Exhibit C-2 – Driver Diagram (Cost Effectiveness)

**Secondary Drivers**

**Primary Drivers**

**Aim**

Provide cost effective care

Enhanced primary care

- Improve preventive service delivery
- Reduce emergency department utilization

Expanded care management

- Improve adherence to chronic disease care guidelines
- Reduce ambulatory-sensitive hospital admissions
- Implement performance-based contracting for HMP
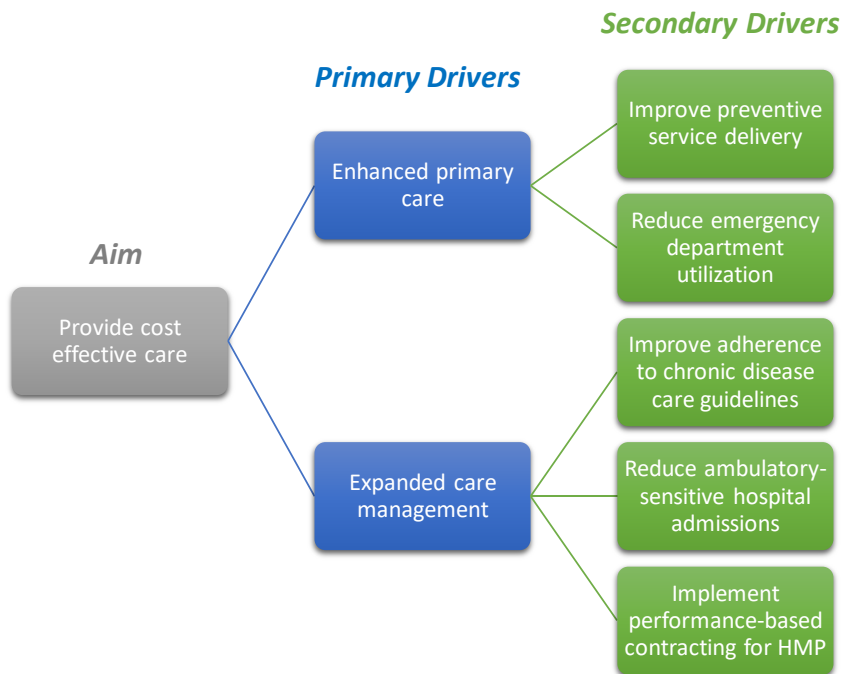
## 2. *Demonstration Hypotheses*

The Demonstration was evaluated through testing of hypotheses related to the HANs, HMP and waiver of retroactive eligibility. Specifically:

1. Evaluation of Health Access Networks

   a. *Impact on Costs:* The implementation and expansion of the HANs will reduce costs associated with the provision of health care services to SoonerCare beneficiaries served by the HANs;

   b. *Impact on Access:* The implementation and expansion of the HANs will improve access to and the availability of health care services to SoonerCare beneficiaries served by the HANs;

   c. *Impact on Quality and Coordination:* The implementation and expansion of the HANs will improve the quality and coordination of health care services to SoonerCare beneficiaries served by the HANs, with specific focus on the populations at greatest risk, including those with one or more chronic illness; and

   d. *Impact on PCMH Program:* The implementation and expansion of the HANs will enhance the State's Patient Centered Medical Home program by making HAN care management support and practice enhancement available to more providers, as documented through an evaluation of PCP profiles that incorporates a review of utilization, disease guideline compliance and cost.

2. Evaluation of the Health Management Program

   a. *Impact on Enrollment Figures:* The implementation of the HMP, including health coaches and practice facilitation, will result in an increase in enrollment, as compared to baseline;

   b. *Impact on Access to Care:* Incorporating health coaches into primary care practices will result in increased contact with HMP beneficiaries by the PCP (measured through claims encounter data), as compared to baseline, when care management occurred via telephonic or face-to-face contact with a nurse care manager;

   c. *Impact on Identifying Appropriate Target Population:* The implementation of the HMP, including health coaches and practice facilitation, will result in a change in the characteristics of the beneficiary population enrolled in the HMP (as measured through claims data to identify characteristics such as disease burden and co-morbidity) compared to baseline[16];

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[16] The wording of this hypothesis was retained from earlier evaluation periods and refers to the HMP's transition to practice-embedded health coaches. This transition happened several years prior the period being evaluated in

d. *Impact on Health Outcomes:* Use of disease registry functions by the health coach will improve the quality of care delivered to beneficiaries, as measured by changes in performance on the initial set of Health Care Quality Measures for Medicaid-Eligible Adults or CHIPRA Core Set of Children's Healthcare Quality Measures;

e. *Impact on Cost/Utilization of Care - ER:* Beneficiaries using HMP services will have fewer ER visits, as compared to beneficiaries not receiving HMP services (as measured through claims data);

f. *Impact on Cost/Utilization of Care - Hospital:* Beneficiaries using HMP services will have fewer admissions and readmissions to hospitals, compared to beneficiaries not receiving HMP services (as measured through claims data);

g. *Impact on Satisfaction/Experience with Care:* Beneficiaries using HMP services will have high satisfaction and will attribute improvement in health status (if applicable) to the HMP[17]; and

h. *Impact on Effectiveness of Care:* Per member per month health expenditures for members enrolled in HMP will be lower than would have occurred absent their participation in nurse care management.

3. Evaluation of Retroactive Eligibility Waiver: The evaluation will support the hypothesis that the waiver of retroactive eligibility is an appropriate feature of the program, as measured by:

a. *Impact on Access to Care:* Eliminating retroactive eligibility will increase the likelihood of enrollment and enrollment continuity;

b. *Impact on Quality of Care – Health Status at Enrollment:* Eliminating retroactive eligibility will increase enrollment of eligible people when they are healthy relative to those eligible people who have the option of retroactive eligibility; and

c. *Impact on Quality of Care – Health Outcomes:* Through greater continuity of coverage, health outcomes will be better for those subject to retroactive eligibility waivers compared to other Medicaid beneficiaries who have access to retroactive eligibility.

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this report. PHPG focused on the appropriateness of the enrolled population over the three years but did not seek to do a look-back to the original HMP population, which was enrolled in 2008-2009.

[17] The SoonerCare STCs state, "Beneficiaries using HMP services will have higher satisfaction compared to beneficiaries not receiving HMP services (as measured through CAHPS survey data)." The OHCA's CAHPS surveyor is not able to identify HMP members within the larger survey universe. PHPG therefore added evaluation-designated CAHPS survey questions to its targeted survey instrument to collect data for this hypothesis.

## Alignment of Demonstration Goals and Hypotheses

The OHCA's overarching goals for SoonerCare Choice are to provide <u>accessible, high quality and cost-effective care</u> to SoonerCare Choice beneficiaries. The research questions answered by testing Demonstration hypotheses align with these goals, as illustrated in Exhibit C-3 below.

### *Exhibit C-3 – Alignment of Goals and Hypotheses*

| Goal | Demonstration Component | Hypothesis/Research Question(s) |
|---|---|---|
| *Health Access Networks* | | |
| **Accessible Care** | Health Access Network | Will the implementation and expansion of the HANs improve access to and the availability of health care services to SoonerCare beneficiaries served by the HANs? |
| **High Quality Care** | Health Access Networks | Will the implementation and expansion of the HANs improve the quality and coordination of health care services to SoonerCare beneficiaries served by the HANs, including those with one or more chronic illness? |
| | | Will the implementation and expansion of the HANs enhance the State's Patient Centered Medical Home program by making HAN care management support and practice enhancement available to more providers (as documented through an evaluation of PCP profiles that incorporates a review of utilization, disease guideline compliance and cost)? |
| | | Will beneficiaries enrolled with a HAN PCMH provider have higher satisfaction, compared to beneficiaries enrolled with a non-HAN PCMH (as measured through Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey data)? |

| Goal | Demonstration Component | Hypothesis/Research Question(s) |
|------|------------------------|--------------------------------|
| **Cost Effectiveness** | Health Access Networks | Will the implementation and expansion of the HANs reduce cost associated with provision of health care services to SoonerCare beneficiaries served by the HANs? |
| *Health Management Program* | | |
| **Accessible Care** | Health Management Program | Will implementation of the HMP, including health coaches and practice facilitation, result in an increase in enrollment, as compared to baseline?<br><br>Will incorporating health coaches into primary care practices result in increased contact with HMP beneficiaries by the PCP (measured through claims encounter data), as compared to baseline, when care management occurred (exclusively) via telephonic or face-to-face contact with a nurse care manager? |
| **High Quality Care** | Health Management Program | Will implementation of the HMP result in a change in the characteristics of the beneficiary population enrolled in the HMP (as measured through population characteristics, including disease burden and co-morbidity obtained through claims and algorithms) compared to baseline?<br><br>Will the use of disease registry functions by the health coach (along with other coaching activities) improve the quality of care delivered to beneficiaries, as measured by changes in performance on the initial set of Health Care Quality Measures for Medicaid-Eligible Adults or CHIPRA Core Set of Children's Healthcare Quality Measures?<br><br>Will beneficiaries using HMP services have high satisfaction and attribute improvement in health status (if applicable) to the HMP? |

| Goal | Demonstration Component | Hypothesis/Research Question(s) |
|---|---|---|
| **Cost Effectiveness** | Health Management Program | Will ER and hospital utilization for members enrolled in the HMP be lower than would have occurred absent their participation? |
| | | Will per member per month health expenditures for members enrolled in the HMP be lower than would have occurred absent their participation? |
| *Waiver of Retroactive Eligibility* | | |
| **Accessible Care** | Enrollment | Do eligible people subject to retroactive eligibility waivers enroll in Medicaid at the same rate as other eligible people who have access to retroactive eligibility? |
| | | Do eligible people subject to retroactive eligibility waivers continue enrollment at the same rate as other eligible people who have access to retroactive eligibility? |
| | | Do eligible people subject to retroactive eligibility waivers who disenroll have shorter enrollment gaps than eligible people who have access to retroactive eligibility? |
| **High Quality Care** | Health Status | Do newly-enrolled beneficiaries subject to retroactive eligibility waivers have higher self-assessed health status than eligible people who have access to retroactive eligibility? |
| | | Do eligible people subject to retroactive eligibility waivers have better health outcomes than eligible people who have access to retroactive eligibility? |

## Promotion of Title XIX Objectives

The Affordable Care Act (ACA) included provisions for Medicaid related to quality of care and delivery systems. Specifically, the ACA anticipates that, "improvements will be made in the quality of care and the manner in which that care is delivered, while at the same time reducing costs."[18]

The SoonerCare Demonstration promotes these ideals through the overarching goals of providing accessible, high quality and cost-effective care to SoonerCare Choice beneficiaries. The evaluation methodology presented in the next section is designed to measure the Demonstration's performance in achieving these goals.

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[18] https://www.medicaid.gov/about-us/program-history/index.html

## D. EVALUATION METHODOLOGY

### 1. *Evaluation Design*

#### Overview

The SoonerCare Choice evaluation was conducted in accordance with an evaluation design approved by CMS in November 2019. A copy of the final approved design measure set is included as Appendix 1[19].

The OHCA and evaluator (PHPG) relied on CMS guidance for developing robust research methods, intended to isolate the impact of the Demonstration on covered populations. The retroactive eligibility component of the design adhered to specific guidance released by CMS for use by states with retroactive eligibility waivers, to ensure comparability of findings across Demonstrations.

The purpose of the evaluation was to establish whether a causal relationship exists between enrollment in one of the SoonerCare Choice care management programs and between SoonerCare eligibility policy and outcomes related to access, quality and cost effectiveness. The evaluation design sought to establish or rule out such a relationship through a mixed methods approach. This included comparing outcomes between the "treatment" group and a counterfactual in the form of a comparison group chosen to match the treatment group on demographic and health status characteristics. It also included time series analysis, descriptive statistics and qualitative data collection to support quantitative findings.

The SoonerCare Choice evaluation uses best available data, including nationally-validated measures developed by HEDIS and the Agency for Healthcare Research and Quality (AHRQ). It also includes nationally-validated survey questions from the Consumer Assessment of Healthcare Providers and Systems (CAHPS), Behavioral Risk Factor Surveillance System (BRFSS) and National Health Interview Survey (NHIS). The evaluation uses State-specific measures where a national measure does not exist.

A portion of the HEDIS measure set also is part of CMS' schedule of Core Set Measures for children and adults. CMS publishes an annual report of Core Set Measure data for reporting states and identifies the median (50th percentile) rate across states for each measure. PHPG included the 50th percentile rate for the published 2020 measure set, where available, as a point of comparison to the Oklahoma data.

States use varying methods to collect Core Set data (i.e., analysis of administrative (paid claims)-only versus a "hybrid" combination of administrative and medical record data); the demographic make-up of states also differ significantly. Caution therefore should be exercised when comparing

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[19] The narrative portion of the approved design is largely replicated in Sections B – D and so is not presented again in the Appendix. The full evaluation design document is available as a component of the Demonstration Special Terms and Conditions posted on the OHCA website at OK SoonerCare 1115 Demo STCs 1.31.22.pdf (oklahoma.gov)

national and Oklahoma rates. The comparison is presented for informational purposes only and not as a formal component of the evaluation.

The National Committee for Quality Assurance (NCQA) publishes national Medicaid Quality Compass scores (rates) for CAHPS measures, using data provided by reporting Medicaid health plan products. Where available, PHPG compared SoonerCare CAHPS findings to the Medicaid Quality Compass scores, using the NCQA 2021 Medicaid health plan Quality Compass dataset, as presented by the OHCA's CAHPS survey vendor in its published reports. PHPG selected the median (50th percentile) as the comparison benchmark.

Caution also should be exercised when reviewing benchmark data as Core Set and CAHPS benchmark population characteristics were not matched to the OHCA groups. The data again is presented for informational purposes only.

## CMS Guidance for Enhancement of Approved Evaluation Design

The SoonerCare Choice evaluation design for the current Demonstration period was approved by CMS before development of the summative evaluation report for the prior Demonstration period (2016 – 2018). CMS granted the OHCA's request for its evaluator to use the updated design for 2016 – 2018 summative evaluation to the extent practicable.

The 2019 – 2023 evaluation design included the same three domains (SoonerCare HAN, SoonerCare HMP and retroactive eligibility) but contained a more comprehensive set of measures than in the originally-approved design for the earlier period. It also incorporated statistical techniques favored by CMS for ensuring analytical rigor.

As part of its subsequent review of the 2016 – 2018 summative evaluation report, CMS made recommendations for modifying and enhancing the evaluation methodology prior to its application to the current Demonstration period. The OHCA and its evaluator incorporated the recommendations into the design whenever feasible. This included modifying the approach for evaluating treatment and comparison group characteristics and adding geographic stratification (urban/rural) to the statewide-level analysis. The full set of CMS recommendations are included behind the approved design document in Appendix 1 and are referred to, as applicable, in the body of the report.

## Treatment of Retired HEDIS Measures

The approved evaluation design included several HEDIS measures that subsequently were retired by the HEDIS steward, NCQA.  In circumstances where NCQA identified a replacement measure, the replacement has been used where feasible. These measures are noted in the report.

Retired measures for which NCQA continued to provide the necessary supporting data specifications are included in the interim evaluation but may be discontinued prior to the summative evaluation if the supporting specifications are no longer available.

## Other Deviations from Approved Evaluation Design

PHPG omitted the Insure Oklahoma evaluation domain from Section F (Results) in view of the program's substantial transition to the Medicaid expansion MEG. The enrollment data instead is included in Section B (General Background Information) of the report.

PHPG modified a portion of the retroactive eligibility waiver to account for the suspension of most disenrollments during the PHE. PHPG also modified a small number of measures for which better data was available than called for in the evaluation design.

The SoonerCare HMP evaluation design included an Interrupted Time Series analysis to assess the impact of a new vendor contract, with enhanced health coaching requirements, on member outcomes. The PHE disrupted the vendor's ability to utilize fully all health coaching modalities (i.e., in-office and in-home coaching). PHPG did not conduct the ITS portion of the evaluation but did complete the treatment-comparison group component.

Similarly, the retroactive eligibility evaluation design included an ITS analysis for MEGs subject to the waiver before 2020 and covered for retroactive expenses starting in 2020[20]. The suspension of most disenrollments under the PHE prevented PHPG from performing the ITS analysis.

All of the measure-specific deviations are noted where they occur within Section F (Results). The deviations also are summarized in a table at the end of Appendix 1.

## COVID-19 Public Health Emergency

In August 2020, CMS released a technical assistance document addressing implications of the COVID-19 PHE on Section 1115 Demonstration evaluations. The OHCA and PHPG reviewed the guidance and incorporated it into the evaluation as applicable.

The technical assistance document addresses changes in billing codes resulting from expansion of telehealth services during the PHE. Oklahoma already permitted telehealth visits prior to the PHE and, while telehealth activity increased significantly, the billing codes included in the analysis of service utilization and expenditures did not change.

The document provides options to states with respect to selecting an evaluation base year, if the original base year fell into the PHE period. The SoonerCare interim evaluation covers calendar years 2019 – 2021. The COVID-19 PHE began in March 2020, leaving calendar year 2019 unaffected by the pandemic. (Although calendar year 2019 serves as a base year for the current Demonstration period, trended data for calendar years 2016 – 2018 also is presented for measures that were evaluated in the prior Demonstration period.)

The document addresses challenges in assessing and interpreting trends that include the period affected by the PHE. As recommended by CMS, the evaluation report discusses the implications of the COVID-19 PHE where applicable to findings.

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[20] The revised standards were included in the STCs for 2019 – 2023 but the changes were not implemented in the MMIS until 2020.

## 2. *Target and Comparison Populations*

## SoonerCare HAN and HMP Component of Evaluation

The Demonstration evaluation target populations are SoonerCare HAN (total and Care Managed subgroup) and HMP members. With very few exceptions, the two populations do not overlap; the OHCA reviews enrollment data monthly to identify and resolve any instances of members being co-enrolled in both programs.

The evaluation was structured to isolate, as much as possible, the discrete impact of the HAN and HMP initiatives with respect to access, quality and cost effectiveness. This was accomplished by stratifying SoonerCare Choice members into the following population segments for applicable measures: members enrolled with a SoonerCare HAN PCMH (both total and Care Managed); members enrolled in the SoonerCare HMP; and SoonerCare Choice members not enrolled in either program or in any other SoonerCare program offering care management[21] (unmanaged comparison group).

All of the populations were sufficient in size to be evaluated in isolation. The HAN total population averaged 221,500 members; the HAN Care Managed subset averaged 3,580 members per year; and the HMP population averaged 6,100 members per year. The comparison group exceeded 300,000 members in each year of the evaluation.

The SoonerCare HAN population in total closely resembles the comparison group population in terms of demographics. HAN members are primarily non-disabled children, pregnant women, parents and members with disabilities who are not eligible for Medicare.

The SoonerCare HAN Care Managed and HMP populations include a higher percentage of adults and persons eligible due to Aged, Blind or Disabled (ABD) status[22] than the comparison group population. Coarsened exact matching was used to account for differences between the care managed populations and the comparison group. (See below and Methodology section for more detail on the comparison group method and matching process.)

The evaluation encompassed the entire universe of SoonerCare Choice members, with the exception of certain member surveys (CAHPS and program-specific surveys). These were conducted on a randomly-selected representative sample of SoonerCare HAN, HMP and comparison group members. (For other member surveys, attempts were made to contact 100 percent of the population. See Member Survey Methods below for more detail.)

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[21] Excluded populations consisted of SoonerCare Choice members enrolled in the OHCA's internal care management program known as the "Chronic Care Unit" (CCU), which serves a similar population to the SoonerCare HMP and is open to members without access to the HMP, and SoonerCare Choice members enrolled with a PCMH provider who received practice facilitation through the HMP and had an embedded health coach. The practice facilitation beneficiaries were excluded on the presumption that their PCMH practice benefited from instruction on enhanced care management techniques which may have been applied to their treatment.

[22] The SoonerCare Choice Demonstration does not include persons dually eligible for Medicare and Medicaid. The ABD population enrolled in the Demonstration is Medicaid only.

## Comparison Group Method

All SoonerCare Choice members should have access to preventive services through their PCMH, regardless of whether they receive additional care management through the SoonerCare HAN or HMP. An in-state comparison group method therefore was used for calculation of HEDIS rates across the three populations. This included both population-wide preventive measures and preventive care measures specific to various chronic health conditions.

The comparison group method also was used for evaluating CAHPS ratings among the three populations, with some limitations. The OHCA and its CAHPS vendor were able to stratify survey results between respondents affiliated with a HAN PCMH and all others. The evaluation of CAHPS results for the HAN portion of the evaluation was conducted at this population level, rather than for the subset of HAN members receiving care management.

The OHCA and its CAHPS vendor were not able to identify SoonerCare HMP survey respondents, if any. PHPG instead included a subset of CAHPS survey questions on its targeted survey of SoonerCare HMP members and evaluated the responses against the same comparison group used for the HAN evaluation. Findings should be interpreted with caution given the possible inclusion of SoonerCare HMP members in the broader CAHPS survey universe[23].

Finally, the comparison group method was used to evaluate the cost effectiveness of the HAN and HMP models versus the population not enrolled in either program. This included evaluation of inpatient hospital utilization, ER utilization and per member per month expenditures.

## Member Survey Methods

The evaluation assessed member satisfaction with access to care and care management, including the member's perception of care management's impact on health status, through a combination of CAHPS and targeted surveys.

The OHCA's CAHPS contractor surveyed a random sample of SoonerCare Choice beneficiaries; the contractor and OHCA identified SoonerCare HAN respondents within the response universe and provided beneficiary de-identified data to PHPG for the evaluation.

PHPG attempted to conduct a baseline telephone survey on 100 percent of newly-enrolled HMP participants and a six-month follow-up survey on 100 percent of baseline respondents.

PHPG conducted a targeted telephone survey of SoonerCare HAN Care Managed members to document their satisfaction with HAN activities related to social determinants of health (SDOH). Each of the HANs furnished PHPG with a database of members who had received care management during the current evaluation period. PHPG used database filters and key word searches of care manager notes to identify members with SDOH needs. PHPG attempted to contact 100 percent of these members to complete the survey.

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[23] SoonerCare HMP members comprise less than two percent of the SoonerCare Choice population. Their representation in the survey universe was considered unlikely to be more than a handful of respondents.

PHPG also conducted a targeted telephone/mail survey of HAN-affiliated PCMH providers to document their satisfaction with HAN activities related to practice enhancement. PHPG attempted to contact 100 percent of the providers identified by the HANs as having received practice enhancement assistance, either specific to care management of patients with complex/chronic health conditions or for raising their PCMH tier assignment to a higher level. Due to the low sample size and response rate, the survey results should be treated as qualitative in nature.

In addition, PHPG conducted a targeted baseline telephone survey of a random sample of newly-enrolled SoonerCare Choice beneficiaries subject to the waiver of retroactive eligibility and a comparison group not subject to the waiver. PHPG attempts to reach 100 percent of baseline survey respondents for follow-up surveys conducted at regular intervals (twelve-months, eighteen-months and twenty-four months). The survey tracks changes in respondent physical and behavioral health status, in accordance with the methodology recommended by CMS in its document: Appendix to Eligibility & Coverage Evaluation Guidance: Retroactive Eligibility Waivers.

## Retroactive Eligibility Waiver Component of Evaluation

The evaluation of the waiver of retroactive eligibility is distinct from the other portions of the design. As noted, the approved evaluation design incorporated measures recommended by CMS to all states with retroactive eligibility waivers.

In addition to the survey measures discussed above, the approved design contains a series of measures related to enrollment tenure and coverage gaps, for which members subject to the waiver of retroactive eligibility are to be evaluated against a comparison group of members not subject to the waiver. The design also includes an interrupted time series analysis of members subject to the waiver prior to the current Demonstration period but no longer subject to the waiver as of March 2019.

The emergence of the COVID-19 PHE and resultant suspension of most eligibility-related disenrollments in early 2020 eliminated the normal enrollment churn experienced by Medicaid programs. Enrollment statistics for both populations (treatment and comparison groups) are included in the report but no conclusions are offered based on the trend lines. PHPG will report findings for the post-PHE period in accordance with the evaluation design in the summative evaluation report.

## Building upon and Expanding Earlier Demonstration Evaluation Findings

The SoonerCare model in the current period is a continuation of the model in place during the prior Demonstration period (calendar years 2016 – 2018). As discussed earlier, the approved evaluation design for the current Demonstration period also was used, to the extent practicable, for the evaluation of the prior period. However, the approved design was modified and enhanced in accordance with CMS recommendations, following completion of the Summative evaluation report for the prior period.

The modifications included refinements to the initial paid claims extract from the OHCA Medicaid Management Information System, to ensure the universe included only beneficiaries eligible for

SoonerCare Choice[24], as well as a change to the matching methodology used for selection of comparison groups. In addition, the HAN portion of the evaluation was expanded to include a targeted analysis of the HAN Care Managed subgroup, to better isolate the impact of the HAN program on the enrolled population. The prior period evaluation examined only the HAN population in total[25].

These changes made it necessary to use calendar year 2019 as the base year for the evaluation. However, the SoonerCare HMP population was evaluated in both Demonstration periods using many of the same measures. Where available, trended data for the SoonerCare HMP program is presented for the entire six-year period of calendar years 2016 – 2021[26].

## 3. Evaluation Period

The Demonstration period addressed in the interim evaluation is calendar years 2019 – 2021. This also served as the default time period for evaluation measures, with calendar year 2019 serving as the base year. The summative evaluation report will address calendar years 2019 – 2023 and will be issued in accordance with Demonstration Special Terms and Conditions.

Exhibit D-1 below presents a deliverable schedule for the interim and summative evaluation reports.

### *Exhibit D-1 – Evaluation Deliverable Schedule*



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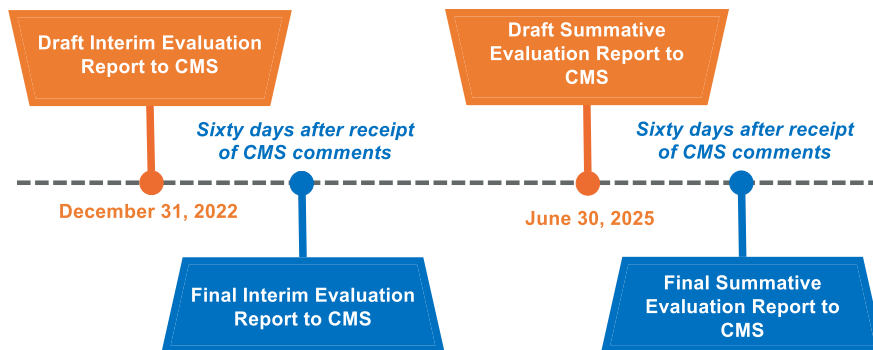
[24] The paid claims/eligibility extract for the 2016 – 2018 evaluation included all beneficiaries with a "Title XIX" designation who belonged to one of the Demonstration MEGs. The 2019 – 2021 extract excluded beneficiaries who lacked a secondary "SoonerCare Choice" designation (a separate field in the MMIS). PHPG applied the additional filter in consultation with the OHCA to ensure the data universe erred on the side of only containing beneficiaries who were enrolled in SoonerCare Choice.

[25] The HAN Care Managed subgroup also is included within the analysis of the HAN total population. The subgroup represents approximately two percent of the total.

[26] PHPG examined six-year trend lines on a measure-by-measure basis and excluded this data for any measures that appeared to be affected by the refinement of the claims/eligibility extract and matching methods between Demonstration periods. These were isolated within the CAD and COPD measures and, in all cases, showed a greater than expected improvement from 2018 to 2019.

## Evaluation Measures

Demonstration evaluation measures are listed below, by evaluation component and hypothesis/question. Exhibits D-2 through D-8 present the measures and their sources (e.g., HEDIS or CAHPS), as applicable.  Appendix 1 (approved evaluation design) contains detailed specifications for each measure.

## Evaluation of Health Access Networks – Access to Care

HAN performance in improving access to care was evaluated through the research question and measures presented below in Exhibit D-2.

### *Exhibit D-2 – HAN Access to Care Measures*

| Hypothesis/Research Question(s) | Measures | Source |
|---|---|---|
| Will the implementation and expansion of the HANs improve access to and the availability of health care services to SoonerCare beneficiaries served by the HANs? | • Children and adolescents' access to PCPs – 12 months to 19 years | HEDIS |
| | • Adults' access to preventive/ambulatory health services | HEDIS |
| | • Getting needed care – children and adults | CAHPS |

## Evaluation of Health Access Networks – Quality of Care

HAN performance in improving quality of care was evaluated through the research questions and measures presented below in Exhibit D-3.

*Exhibit D-3 – HAN Quality of Care Measures*

| Hypothesis/Research Question(s) | Measures | Source |
|---|---|---|
| Will the implementation and expansion of the HANs improve the quality and coordination of health care services to SoonerCare beneficiaries served by the HANs, including those with one or more chronic illness? | • Number of HAN members engaged in care management | OHCA |
| | • Asthma measures<br>  ○ Asthma medication ratio-5 to 18[27]<br>  ○ Asthma medication ratio-19 to 64 | HEDIS (all remaining measures, except as noted) |
| | • Cardiovascular measures<br>  ○ Persistence of beta-blocker treatment after a heart attack<br>  ○ Cholesterol management for patients with cardiovascular conditions – LDL-C test | |
| | • COPD measures<br>  ○ Use of spirometry testing in the assessment and diagnosis of COPD<br>  ○ Pharmacotherapy management of COPD exacerbation – 14 days<br>  ○ Pharmacotherapy management of COPD exacerbation – 30 days | |
| | • Diabetes measures[28]<br>  ○ Percentage of members who had LDL-C test<br>  ○ Percentage of members who had retinal eye exam performed<br>  ○ Percentage of members who had Hemoglobin A1c (HbA1c) testing<br>  ○ Percentage of members who received medical attention for nephropathy | |

[27] The approved evaluation design included two asthma HEDIS measures which have been retired: Use of appropriate medications for people with asthma and medication management for people with asthma – 75 percent. PHPG replaced these measures with a successor measure, asthma medication ratio.

[28] The approved evaluation design included an additional diabetes measure that has been retired: Percentage of members prescribed angiotensin converting enzyme inhibitors or angiotensin receptor blockers (ACE/ARB therapy).

| Hypothesis/Research Question(s) | Measures | Source |
|---|---|---|
| Will the implementation and expansion of the HANs improve the quality and coordination of health care services to SoonerCare beneficiaries served by the HANs, including those with one or more chronic illness? *Continued* | • Hypertension measures[29] <br>    ○ Percentage of members who had LDL-C test <br>    ○ Percentage of members prescribed ACE/ARB therapy <br>    ○ Percentage of members prescribed diuretics <br><br> • Mental Health measures[30] <br>    ○ Follow-up after hospitalization for mental illness – 7 days <br>    ○ Follow-up after hospitalization for mental illness – 30 days | |
| Will the implementation and expansion of the HANs enhance the State's Patient Centered Medical Home program by making HAN care management support and practice enhancement available to more providers, as documented through an evaluation of PCP profiles that incorporates a review of utilization, disease guideline compliance and cost? | • Number and percentage of HAN-affiliated members aligned with a PCMH who has attained the highest level of OHCA accreditation[31,32] | OHCA |

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[29] The approved evaluation design included an additional hypertension measure that has been retired: Percentage of members prescribed ACE/ARB therapy or diuretics with annual medication monitoring.

[30] Measures are "HEDIS-like", as the HEDIS specifications are based on counts of discharges and not unique member counts and the 1115 evaluation is based on a unique member count of those members with discharges, to accommodate minimum HAN and HMP enrollment tenures.

[31] The SoonerCare STCs use the term "accreditation". The OHCA typically uses the term "tier designation" to distinguish SoonerCare PCMH standards from those of national accrediting bodies. The two terms are used interchangeably in the report.

[32] The 2019 – 2023 evaluation design approved by CMS (and adopted by the OHCA to the extent practical for the 2016 – 2018 evaluation) defined this measure using PCMH counts by tier, rather than beneficiary counts. However, the largest HAN provides care primarily through university clinics and reports its network data at the clinic, rather than practitioner level. Beneficiary counts were selected as a more accurate measure.

| Hypothesis/Research Question(s) | Measures | Source |
|---|---|---|
| Will beneficiaries enrolled with a HAN PCMH provider have higher satisfaction, compared to beneficiaries enrolled with a non-HAN PCMH? | • Rating of health care – children and adults<br><br>• Rating of health plan – children and adults<br><br>• Rating of personal doctor – children and adults | CAHPS (first three measures) |
| | • Rating of assistance with SDOH | PHPG targeted survey |

## Evaluation of Health Access Networks – Cost Effectiveness

HAN cost effectiveness was evaluated through the research question and measures presented below in Exhibit D-4.

*Exhibit D-4 – HAN Cost Effectiveness Measures*

| Hypothesis/Research Question(s) | Measures | Source |
|---|---|---|
| Will the implementation and expansion of the HANs reduce cost associated with provision of health care services to SoonerCare beneficiaries served by the HANs? | • Emergency room utilization<br><br>• Hospital admissions<br><br>• Per member per month health expenditures | OHCA (MMIS) |

## Evaluation of Health Management Program – Access to Care

HMP performance in improving access to care was evaluated through the research questions and measures presented in Exhibit D-5.

*Exhibit D-5 – HMP Access to Care Measures*

| Hypothesis/Research Question(s) | Measures | Source |
|---|---|---|
| Will the implementation of the HMP, including health coaches and practice facilitation, result in an increase in enrollment, as compared to baseline? | • Number of HMP beneficiaries engaged in health coaching | OHCA |
| Will incorporating health coaches into primary care practices result in increased contact with HMP beneficiaries by the PCP (measured through claims encounter data), as compared to baseline, when care management occurred (exclusively) via telephonic or face-to-face contact with a nurse care manager? | • Children and adolescents' access to PCPs – 12 months to 19 years<br><br>• Adults' access to preventive/ambulatory health services[33] | HEDIS |

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[33] The approved evaluation design included a simple measure of PCMH contacts. PHPG replaced this measure with the two HEDIS preventive care measures in order to maximize use of validated measures and to align with the HAN Access to Care evaluation.

## Evaluation of Health Management Program – Quality of Care

HMP performance in improving quality of care was evaluated through the research questions and measures presented below in Exhibit D-6.

*Exhibit D-6 – HMP Quality of Care Measures*

| Hypothesis/Research Question(s) | Measures | Source |
|---|---|---|
| Will the implementation of the HMP result in a change in characteristics of the beneficiary population enrolled in the HMP (as measured through population characteristics, including disease burden and co-morbidity obtained through claims and algorithms) as compared to baseline? | • Number of chronic conditions<br><br>• Percentage of members with physical/behavioral health co-morbidities | OHCA (MMIS) |
| Will the use of disease registry functions by the health coach (along with other coaching activities) improve the quality of care delivered to beneficiaries, as measured by changes in performance on the initial set of Health Care Quality Measures for Medicaid-Eligible Adults or CHIPRA Core Set of Children's Healthcare Quality Measures?[34] | • Asthma measures<br>   o Asthma medication ratio-5 to 18[35]<br>   o Asthma medication ratio-19 to 64<br><br>• Cardiovascular (CAD and heart failure) measures<br>   o Persistence of beta-blocker treatment after a heart attack<br>   o Cholesterol management for patients with cardiovascular conditions – LDL-C test | HEDIS (all measures, except as noted) |

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[34] The approved evaluation included four Agency for Healthcare Research and Quality (AHRQ) hospital utilization measures (COPD or asthma in older adults admission rate; asthma in younger adults' admission rate; heart failure admission rate; and diabetes short-term complications admission rate). PHPG determined there were too few cases to evaluate reliably and excluded the measures from the analysis. PHPG will re-examine the measures for the summative evaluation.

[35] The approved evaluation design included two asthma HEDIS measures which have been retired: Use of appropriate medications for people with asthma and medication management for people with asthma – 75 percent. PHPG replaced these measures with a successor measure, asthma medication ratio.

| Hypothesis/Research Question(s) | Measures | Source |
|---|---|---|
| Will the use of disease registry functions by the health coach (along with other coaching activities) improve the quality of care delivered to beneficiaries, as measured by changes in performance on the initial set of Health Care Quality Measures for Medicaid-Eligible Adults or CHIPRA Core Set of Children's Healthcare Quality Measures? *continued* | • COPD measures<br>  o Use of spirometry testing in the assessment and diagnosis of COPD<br>  o Pharmacotherapy management of COPD exacerbation – 14 days<br>  o Pharmacotherapy management of COPD exacerbation – 30 days<br><br>• Diabetes measures[36]<br>  o Percentage of members who had LDL-C test<br>  o Percentage of members who had retinal eye exam performed<br>  o Percentage of members who had Hemoglobin A1c (HbA1c) testing<br>  o Percentage of members who received medical attention for nephropathy<br><br>• Hypertension measures[37]<br>  o Percentage of members who had LDL-C test<br>  o Percentage of members prescribed ACE/ARB therapy<br>  o Percentage of members prescribed diuretics<br><br>• Mental Health measures<br>  o Follow-up after hospitalization for mental illness – 7 days<br>  o Follow-up after hospitalization for mental illness – 30 days<br><br>• Opioid measures<br>  o Use of opioids at high dosage in persons without cancer<br>  o Concurrent use of opioids and benzodiazepines | |

[36] The approved evaluation design included an additional diabetes measure that has been retired: Percentage of members prescribed angiotensin converting enzyme inhibitors or angiotensin receptor blockers (ACE/ARB therapy).

[37] The approved evaluation design included an additional hypertension measure that has been retired: Percentage of members prescribed ACE/ARB therapy or diuretics with annual medication monitoring.

| Hypothesis/Research Question(s) | Measures | Source |
|---|---|---|
| Will the use of disease registry functions by the health coach (along with other coaching activities) improve the quality of care delivered to beneficiaries, as measured by changes in performance on the initial set of Health Care Quality Measures for Medicaid-Eligible Adults or CHIPRA Core Set of Children's Healthcare Quality Measures? *continued* | • Social Determinants of Health<br>  ○ Member awareness and use of available SDOH assistance (targeted member survey)<br>  ○ Member satisfaction with SDOH assistance (targeted member survey) | PHPG (targeted survey) |
| Will beneficiaries using HMP services have high satisfaction and attribute improvement in health status (if applicable) to the HMP? | • Overall satisfaction with health coach<br><br>• Overall satisfaction with HMP<br><br>• Change in health status (self-reported)<br><br>• Contribution of HMP to improved health status (if applicable) | PHPG (targeted survey) |

## Evaluation of Health Management Program – Cost Effectiveness

HMP cost effectiveness was evaluated through the research questions and measures presented below in Exhibit D-7.

*Exhibit D-7 – HMP Cost Effectiveness Measures*

| Hypothesis/Research Question(s) | Measures | Source |
|---|---|---|
| Will beneficiaries using HMP services have fewer ER visits compared to beneficiaries not receiving HMP services? | • Emergency room utilization | OHCA (MMIS) |
| Will beneficiaries using HMP services have fewer (admissions and) readmissions compared to beneficiaries not receiving HMP services? | • Hospital admission rate<br><br>• Hospital readmission rate | OHCA (MMIS) |
| Will per member per month expenditures health for members enrolled in HMP be lower than would have occurred absent their participation? | • Per member per month expenditures[38] | OHCA (MMIS) |

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[38] The approved evaluation design included an additional step to calculate total expenditures inclusive of HMP administrative expenses. Telligen health coach FTE costs are reported to the OHCA but the health coaches perform a variety of tasks. In addition to direct care management, the health coaches also are responsible for supporting the practices in which they are embedded and for providing short term assistance to patients referred by the PCMH provider but not enrolled formally into the program. Health coaches also have administrative, documentation and reporting duties. PHPG will collaborate with the OHCA and vendor for the summative evaluation report to isolate direct care management activities/costs and activities/costs of other personnel supporting the health coaches (e.g., resource specialists) to allow for an accurate accounting of relevant administrative expenses.

## Evaluation of Retroactive Eligibility Waiver

The appropriateness of the waiver of retroactive eligibility and its impact on beneficiary enrollment patterns and health status was evaluated through the research question and measures presented below in Exhibit D-8.

*Exhibit D-8 – Retroactive Eligibility Waiver Appropriateness*

| Hypothesis/Research Question(s) | Measures | Source |
|---|---|---|
| Do eligible people subject to the retroactive eligibility waivers enroll in Medicaid at the same rate as other eligible people who have access to retroactive eligibility?[39] | • The number of individuals enrolled in Medicaid by eligibility group, by quarter<br><br>• The number of new enrollees in Medicaid by eligibility group, by quarter<br><br>• Probability of remaining enrolled in Medicaid for 12-, 18- 24-consecutive months, by eligibility group<br><br>• Number of months with Medicaid coverage (average tenure) | OHCA (eligibility system) |
| Do beneficiaries subject to retroactive eligibility waivers who disenroll from Medicaid have shorter enrollment gaps than other beneficiaries who have access to retroactive eligibility? | • Possibility of re-enrolling in Medicaid after a gap in coverage of six months<br><br>• Number of months without Medicaid coverage, up to six months | OHCA (eligibility system) |
| Do newly-enrolled beneficiaries subject to a waiver of retroactive eligibility have higher self-assessed health status than other newly-enrolled beneficiaries who have access to retroactive eligibility? | • Beneficiary self-reported health status; reported prior year utilization | PHPG (targeted survey) |

[39] The approved evaluation design included a measure of the probability of completing the renewal process, by eligibility group. PHPG was unable to obtain data for this measure for the interim evaluation. If data becomes available it will be included in the summative evaluation report.

| Hypothesis/Research Question(s) | Measures | Source |
|---|---|---|
| Do beneficiaries subject to the retroactive eligibility waiver have better health outcomes than other beneficiaries who have access to retroactive eligibility? | • Beneficiary self-reported health status; healthy days<br><br>• Change in physical and mental health status, measured at baseline and at 12, 18 and 24 months | PHPG (targeted survey) |

## 4. *Data Sources*

The SoonerCare evaluation was conducted using a variety of data sources, including eligibility/paid claims data and beneficiary and provider survey data.

## Eligibility and Paid Claims Data

PHPG analysts were granted access to the OHCA MMIS and worked directly with eligibility and paid claims data for calculation of HEDIS rates, utilization trends and PMPM health expenditures. PHPG has worked within the OHCA MMIS for over a decade and performs routine quality checks to validate the completeness of the claims data, including comparison of month-to-month variance in expenditures by category-of-service, to identify and research potential data gaps. PHPG uses data smoothing and similar techniques to close gaps, if necessary.

PHPG also accounts for incurred but not received (IBNR) claims when performing utilization and expenditure calculations. The paid claims data for calendar years 2019 – 2021 was extracted in July 2022, making it unnecessary to apply claims completion factors to the data in this instance.

## CAHPS Survey

The evaluation included CAHPS 5.0H survey data collected by the OHCA's contracted CAHPS surveyor, which uses a combined, mail/telephone/internet protocol to maximize response rates. The OHCA and surveyor furnished PHPG with respondent de-identified child and adult CAHPS data; the data included flags for respondents whose PCMH providers were affiliated with a HAN.

PHPG used the data to evaluate beneficiary responses to CAHPS questions, stratified by HAN enrollment status. Although the CAHPS surveyor conducted the surveys, PHPG was solely responsible for calculating and reporting the stratified results.

The most recently-published child and adult SoonerCare CAHPS reports, as well as archived reports, are posted on the OHCA's website[40]. The reports describe the surveyor's methodology in greater detail and provide complete survey findings.

## Targeted Surveys

PHPG also conducted targeted surveys of beneficiaries and providers to capture data for evaluation measures in the SoonerCare HAN, SoonerCare HMP and retroactive eligibility components of the evaluation. The survey instrument used for the retroactive eligibility component of the evaluation included nationally-validated questions from CAHPS, BRFSS and NHIS, as recommended by CMS in its evaluation design guidance. PHPG's survey unit conducted all surveys by telephone, although providers also were given the option of completing and returning hard copies of the surveys.

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[40] http://www.okhca.org/research.aspx?id=87

## 5. Analytic Methods

### Overview

The evaluation data analysis consists of both exploratory and descriptive strategies and incorporates univariate, bi-variate, and multi-variate techniques. The analysis applied statistical and/or logical techniques to describe, summarize, and compare data within the State and across time.

Descriptive statistics are used to illustrate the basic features of the data and what they depict, and to provide simple summaries about the sample and the measures. They also are used to provide summaries about members and their outcomes.

An exploratory data analysis was employed to compare many variables in the search for organized patterns. Data was analyzed as rates, proportions, frequencies, and measures of central tendency, and/or qualitatively analyzed for themes. Where available, results are compared to national benchmarks for informational purposes only.

As appropriate, analytic methods included t-test, ANOVA, and coarsened exact matching with weighted t-test. These methods were used for comparing sample and population proportions and means against each other, specifically where one group had received treatment/intervention and another had not. (See below for additional detail on the coarsened exact matching procedure.)

T-tests and ANOVA are appropriate when granular (member-level) data is not available, but population-level proportions, means and standard deviations are, the outcome variable is continuous, and the objective is to determine whether the proportion or mean of a certain outcome variable of interest is significantly different between two or more groups. T-tests allow for comparison of proportions or means between two groups whereas ANOVA allows this to be done for more than two groups.

The analysis was performed both at a statewide level and stratified into urban and rural subgroups, subject to sample size limitations. The urban subgroup consists of the counties comprising the greater Oklahoma City, Tulsa, and Lawton metropolitan areas; the rural subgroup consists of the remainder of the State.

The traditionally accepted significance level ($p \leq 0.05$) was used for all comparisons.

### Coarsened Exact Matching

Coarsened exact matching applies the concept that multiple covariates (e.g., gender, age) and specific characteristics (e.g., urban versus rural or presence/absence of a medical condition such as asthma or diabetes) may be salient covariates for determining health outcomes.

The analysis universe includes various archetypes of individuals with combinations of properties (e.g., female, under age 18, urban). The relative frequency of a particular archetype will vary

between the treatment and potential comparison group populations. To match and normalize the two populations more effectively, bins or coarsened values are constructed (e.g., coarsening into age cohorts, such as under21 – 30, 31 – 40 etc.) and used for the matching step.

Final weights then are determined by assigning a weight of 0 to all unmatched (comparison group and treatment) observations and a weight of 1 to all matched treatment observations. Matched comparison observations are given a positive weight (either fractional or greater than or equal to 1) such that the bin/archetype distribution of the comparison group (matched observations) can match that of the treatment group (matched observations).

The formula is as follows:

$$weight = \frac{\frac{treatment_n}{comparison_n}}{\frac{comparison_{total}}{treatment_{total}}}$$

*Where:*

> *Treatment_{total} and Comparison_{total} represent the total number of matched observations in the treatment and comparison groups, respectively; and*
>
> *Treatment and comparison represent the number of matched treatment_n and comparison_n groups, respectively, that belong to archetype (or bin) n (i.e., a specific combination/bin of attributes).*

The weight value is later applied in the t-test to ensure, when comparing the sample means, that the observations are appropriately weighted.

## Controlling for Member Characteristics

The design relies on measures that by nature include participants with attributes that are highly correlated. For example, many measures focus on a specific diagnosis, medication, age band or treatment condition. The inclusion and exclusion criteria for each measure limits the variability of beneficiary characteristics that are observed in the data.

As part of the analysis, and based on the viability of the sample size, the evaluation controls for the following member demographic characteristics: age, gender, urban/rural status, aid category code and, for a subset of measures, claims history (prior year cost), using the following covariates for coarsened exact matching to produce weights:

$$Group \sim Age + Gender + Urban/Rural + ABD_{year} + ClaimsHistory_{year}$$

For geography (urban/rural), members were classified using the same parameters as for geographic stratification. The urban subgroup consisted of the counties comprising the greater Oklahoma City, Tulsa, and Lawton metropolitan areas; the rural subgroup consisted of the remainder of the State.

For aid category, members were classified either as Aged, Blind or Disabled (ABD) without Medicare or non-ABD (all others). (ABD members with Medicare are not part of the Demonstration.)

Claims history was included as a variable for HAN Care Managed and HMP utilization and expenditure measures, to better approximate the characteristics of these two populations. This was done by replicating the method used to identify candidates for care management.  Both programs use data analytics that rely on claims history as one basis for selecting candidates for enrollment. (Health status/claims history was not considered for HEDIS measures because HEDIS specifications serve an equivalent purpose at the diagnosis code level. Health status/claims history was not available for survey or retroactive eligibility measures that employed matching.)

Average PMPM claim costs were calculated for each SoonerCare Choice member with 12 months of enrollment in a year. The calculation was performed separately for members in 2018, 2019, 2020 and 2021. The PMPM value representing the 95$^{th}$ percentile of cost within each year was identified, i.e., the PMPM value that was higher than the value for 95 percent of members that year.

Matching for each year of the evaluation (2019 – 2021) then was performed on the basis of prior year claim costs, with members in the 95$^{th}$ percentile identified as care management candidates. That is, the care management candidate flag for 2019 was applied based on member costs in 2018 (if the member also was enrolled in 2018); the 2020 flag was applied based on member costs in 2019; and the 2021 flag was applied based on member costs in 2020. Members also were flagged if actually recruited into care management in a given year without the percentile threshold, to account for those without prior year history and those enrolled on another basis, such as diagnosis.

Report appendices labeled "Covariate Balance Tables" provide CEM data, both pre- and post-matching. The post-matching data presents characteristics of the beneficiaries included in the related t-test analysis. Age is shown in years (e.g., 39.5 years of age). Other variables are binary, with the results expressed as a value between 0 and 1. For example, the urban/rural variable classifies members residing in rural areas as "1" and urban areas as "0". The reported value signifies the percent of members with the characteristic designated with a "1" (e.g., an urban/rural value of 0.255 indicates that 25.5 percent of the members reside in a rural area).

## Survey Samples

The sample size for the CAHPS survey was determined by the OHCA's CAHPS survey vendor.  For all non-CAHPS beneficiary surveys, a repeated measures power analysis was used to determine the appropriate sample size. Effect size estimates used in the power calculation were based on the effect size of prior surveys of a similar nature conducted in the State by PHPG. The attrition rate of the same surveys from prior periods also was used to estimate the necessary sample size.

## Isolating Effects of the Demonstration

The SoonerCare Choice Demonstration operates under managed care principles, with PCMH providers, SoonerCare HANs and the HMP performing key managed care functions. SoonerCare Choice members are not co-enrolled for care management in the HAN and HMP, making the populations within these programs unique in their composition.

The evaluation is designed to isolate the effects of the SoonerCare HANs and HMP from other activities through creation of a comparison group comprised of members not enrolled in either program (but still enrolled with a non-HAN affiliated PCMH).

## *6. Other Additions*

None.

## E. METHODOLOGICAL LIMITATIONS

The SoonerCare Choice evaluation was designed to yield accurate and actionable findings but does have methodological limitations, most of which are inherent to the Section 1115 Demonstrations. These include:

- *Lack of true experimental control groups* – The evaluation design includes a comparison group that serves as a reasonable proxy for the two target populations. However, it is not a true experimental control group. PHPG used coarsened exact matching, as feasible, to maximize the validity of the comparison group for the evaluation.

- *SoonerCare HMP child/adolescent HEDIS measures* – The SoonerCare HMP beneficiary population is significantly older than the general SoonerCare population; fewer than 10 percent of HMP beneficiaries are children/adolescents versus 65 percent of the general population. The small universe of HMP beneficiaries under the age of 21 posed challenges when calculating rates for diagnosis-specific pediatric measures. PHPG identified the affected measures within the body of the report.

- *Reliance on administrative data* – HEDIS measures account for a significant portion of the evaluation measure set. The OHCA calculates HEDIS rates using administrative data, which limits the accuracy of measures that require a hybrid method to capture fully beneficiary/provider activity. PHPG accounted for this limitation to the extent practicable by selecting measures that can be calculated accurately using administrative data.

Caution should be exercised when interpreting results. The evaluation examined initiatives (HAN and HMP) and policies (retroactive eligibility) that were implemented prior to 2019. The findings, while descriptive, should not be interpreted as causal evidence for the impact of this Demonstration.

The evaluation also includes a large number of statistical significance tests. In any such test, there is the potential for a "false positive" finding; the large number of tests raises the possibility that one or more findings is due to chance.

In addition to these inherent limitations, the presence of the COVID-19 Public Health Emergency substantially disrupted health care utilization patterns during two of the three years addressed in the interim evaluation. The use of treatment and comparison groups for the majority of measures helps to mitigate the impact of the PHE on findings, to the extent both populations were exposed to the same disruptions in care (e.g., unavailability of office appointments for routine care needs).

The suspension of Most Title XIX disenrollments during the PHE directly affected the portion of the retroactive eligibility evaluation related to enrollment continuity. Descriptive statistics are provided in the interim evaluation but no conclusions can be drawn for the period falling under the PHE.

## F. RESULTS
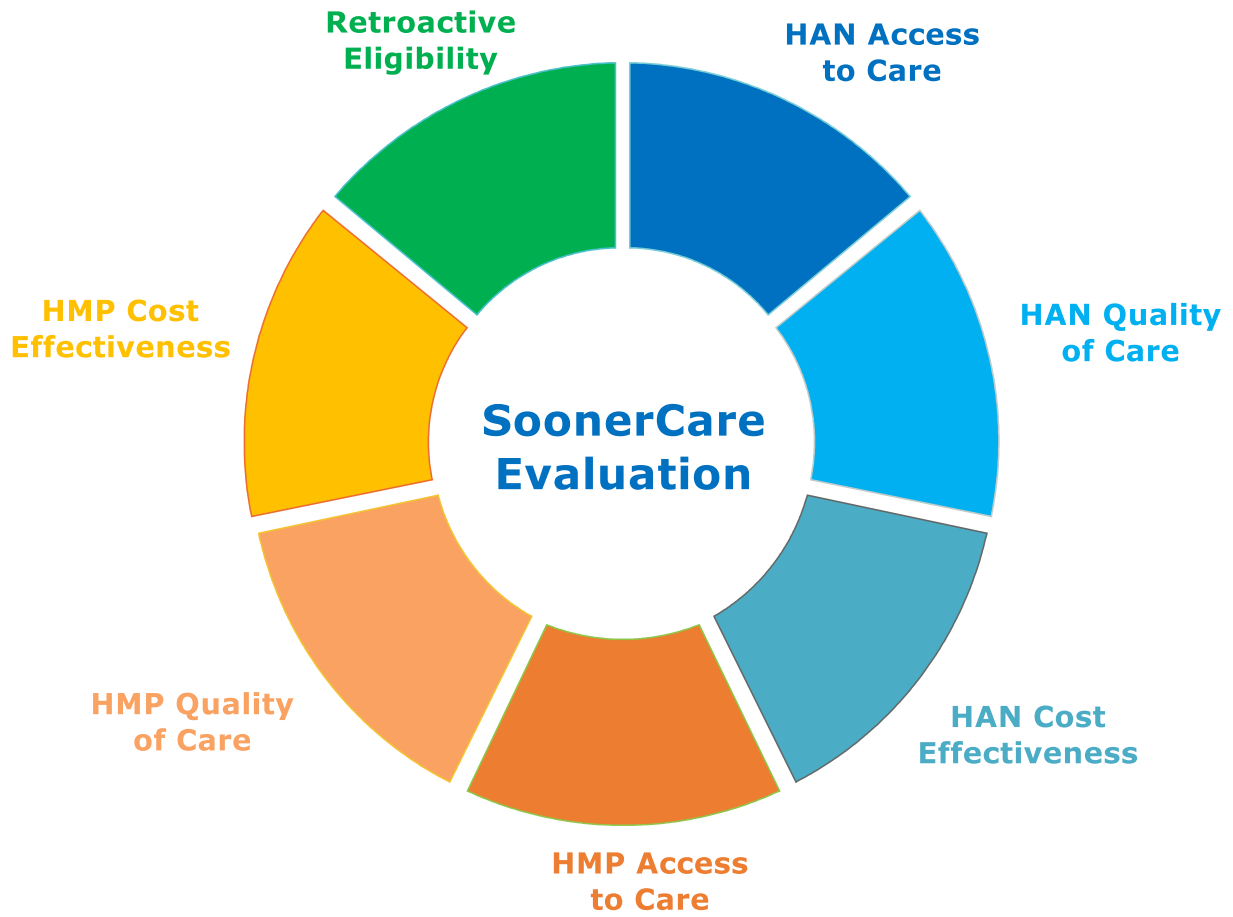


## Introduction

The results of the SoonerCare Choice evaluation are organized by hypothesis/research question. Findings are presented for each measure pertaining to a hypothesis/research question, followed by summary results across all measures. Supporting data for statistical analyses are included in report appendices, as noted within the narrative.

The SoonerCare HAN portion of the evaluation includes findings for the total HAN-aligned population ("HAN total") and, where available, for the subset of HAN members enrolled in care management ("HAN Care Managed"). The distinction is important, as the HAN total population is largely undifferentiated from the non-HAN population. Both groups receive primary care and referral services through their PCMH provider; the sole point of difference is the provider's status as affiliated or not affiliated with a SoonerCare HAN. The HAN Care Managed population is

differentiated in that its members receive additional support with clinical and social service needs through enrollment with a SoonerCare HAN care manager, usually a registered nurse.

The SoonerCare HAN and HMP evaluations present statewide data for all measures. The evaluations also stratify results into urban and rural geographic subgroups, where possible.

The majority of the SoonerCare HAN and HMP measures are reported for each of three years of the evaluation. The individual year results also are pooled to present a three-year average. Statistical significance for the three-year average results were calculated through application of Fisher's Combined Probability Test.

Caution should be exercised when reviewing individual year results and year-over-year changes, particularly with respect to chronic care HEDIS measures, where substantial variance may in part be an artifact of small treatment group population sizes. This applies in particular to the HAN Care Managed and HMP populations. The three-year pooled data is the most robust test of statistical significance between treatment and comparison group populations.

Conversely, a small number of population-level measures, such as for HEDIS preventive care, are susceptible to findings of statistical significance despite small absolute differences in rates between the treatment and comparison group. This applies in particular to the HAN total population and its comparison group.

A portion of the SoonerCare HAN and HMP measures also were evaluated in the previous Demonstration period (calendar years 2016 – 2018). Six-year trend lines for the treatment group are presented where available[41]. Comparison group trendlines are not included due to a change in the matching methodology from the previous period[42].

National benchmarks exist for a portion of the SoonerCare HAN and HMP HEDIS and CAHPS measures. These are presented where available. The HEDIS benchmark is the 50th percentile rate of the CMS 2020 Core Measure Set. The CAHPS benchmark is the 50th percentile rate among Medicaid health plans as reported in the NCQA 2021 Medicaid health plan Quality Compass dataset. Benchmark population characteristics were not matched to the treatment groups; the data is presented for informational purposes only.

The COVID-19 PHE overlapped with two of the three years of the evaluation. Caution should be exercised when reviewing findings due to the PHE's disruptive effect on the health care delivery system.

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[41] See footnote 26.

[42] Propensity Score Matching was used for the 2106 – 2018 evaluation. Coarsened Exact Matching was used for the 2019 – 2021 evaluation.

## Supporting Appendices

Supporting data for narrative findings is included in a series of report appendices. Exhibit F-1 below identifies the contents within each appendix. The appendices specific to each analysis are identified again at the start of the individual results sections.

### *Exhibit F-1 – Supporting Appendices for Results*

| Appendix | Applies to | Contents |
|----------|-----------|----------|
| Appendix 2 | HAN Analysis | CEM covariate balance tables (pre- and post-matching) for HEDIS, utilization and expenditure measures (2019 – 2021) |
| Appendix 3 | HAN Analysis | Statistical significance test results (p<.005) for HEDIS, utilization and expenditure measures (2019 – 2021 and three-year pooled data) |
| Appendix 4 | HAN Analysis | CEM covariate balance tables (pre- and post-matching) for CAHPS measures |
| Appendix 5 | HAN Analysis | Statistical significance test results for CAHPS measures (HAN and comparison group) |
| Appendix 6 | HAN Analysis | HAN member SDOH targeted survey instrument (HAN and comparison group) |
| Appendix 7 | HAN Analysis | HAN-aligned PCMH targeted survey instrument |
| Appendix 8 | HMP Analysis | CEM covariate balance tables (pre- and post-matching) for CAHPS measures (HMP and comparison group) |
| Appendix 9 | HMP Analysis | Statistical significance test results for CAHPS measures (HMP and comparison group) |
| Appendix 10 | HMP Analysis | CEM covariate balance tables (pre- and post-matching) for HEDIS, utilization and expenditure measures (2019 – 2021) |
| Appendix 11 | HMP Analysis | Statistical significance test results (p<.005) for HEDIS, utilization and expenditure measures (2019 – 2021 and three-year pooled data) |
| Appendix 12 | HMP Analysis | HMP member targeted survey instrument (SDOH section only) |
| Appendix 13 | Retroactive Eligibility Analysis | Retroactive eligibility analysis survey instrument |
| Appendix 14 | Retroactive Eligibility Analysis | CEM covariate balance tables (pre- and post-matching) for survey measures |
| Appendix 15 | Retroactive Eligibility Analysis | Statistical significance test results for retroactive survey measures (population subject to waiver and comparison group) |
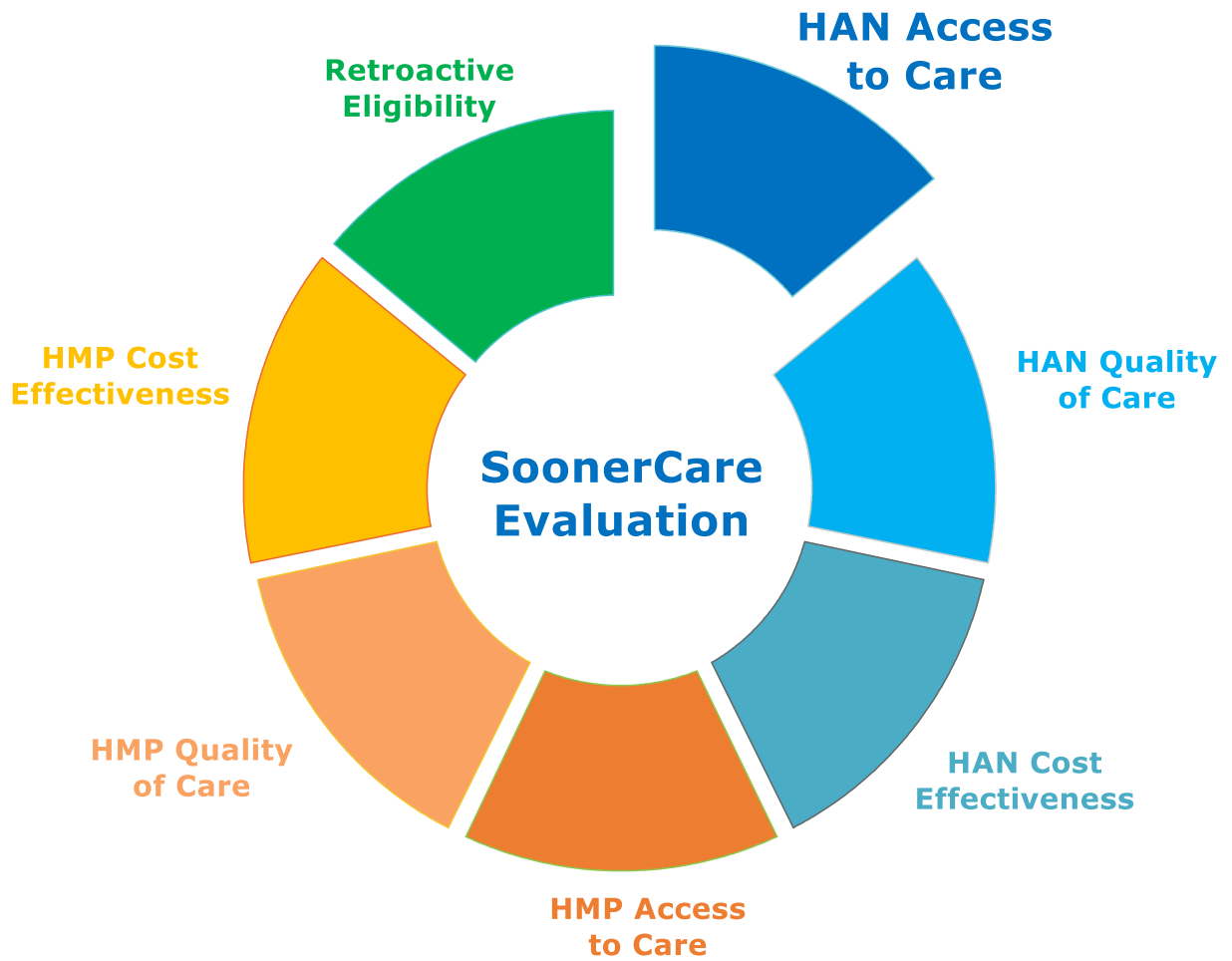
## 1. *SoonerCare HAN Access to Care*

### Overview

The research question for this evaluation component asks: Will the implementation and expansion of the HANs improve access to and the availability of health care services to SoonerCare beneficiaries served by the HANs?

The OHCA, through its contracts with SoonerCare Health Access Networks, requires the HANs to promote improved access to care as part of advancing broader principles of managed care. The OHCA monitors HAN contractual compliance through a quarterly reporting process under which the HANs provide documentation on staffing and updates on activities related to improving access and quality of care. The HANs also submit annual reports summarizing the prior year's activities.

The required access activities include, among others:

- Ensuring access to physical health specialty care for beneficiaries with a HAN-affiliated PCMH;
- Ensuring behavioral health network adequacy and availability; and
- Generating care gap lists for the HAN and/or PCMH to use in identifying beneficiaries who are due for a primary care visit or are potential candidates for care management based on underlying health needs.

### HAN Access to Care Measures

Exhibit F-2 on the following page presents the HAN access to care measures and identifies:

- Data sources
- Subgroups evaluated (if any)
- Presence or absence of a national benchmark
- Presence or absence of comparative data from the prior Demonstration period

### Supporting Appendices

Appendix 2 contains CEM covariate balance tables for HEDIS measures. Appendix 3 contains statistical significance test results for HEDIS measures. Appendix 4 contains CEM covariate balance tables for CAHPS measures. Appendix 5 contains statistical significance tests results for CAHPS measures.

*Exhibit F-2 - HAN Access to Care Measures - Overview*

| Measures | Source | HAN Care Managed Subgroup | Geographic Subgroups | National Benchmark | Prior Period Data |
|---|---|---|---|---|---|
| **Children and adolescents' access to PCPs – 12 months to 19 years** Percentage of beneficiaries 12 months to 19 years of age who had a visit with a PCP during the measurement year. | HEDIS | *Yes* | *Yes* | No | No[43] |
| **Adults' access to preventive/ambulatory health services** Percentage of beneficiaries 20 years of age and older who had an ambulatory or preventive care visit in the measurement year. | HEDIS | *Yes* | *Yes* | No | *Yes* |
| **Getting Needed Care – children and adults** Percentage of beneficiaries (adults and parents/caretakers of children) who reported "always" getting needed care. "Getting Needed Care" is a composite measure consisting of two questions, the first of which asks about getting necessary care, tests or treatment[44] and the second of which asks about getting appointments with specialists as soon as needed[45]. The composite is a simple average of the individual measure percentages. | CAHPS | No | No | *Yes* | *Yes* |

Methodology detail and sample sizes also are included at the bottom of exhibits containing the results of statistical significance tests between treatment (Demonstration) and comparison group populations.

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[43] Consolidated measure for 12 months to 19 years introduced for the HAN portion of the evaluation in current period. Prior period reported multiple age cohorts.

[44] In the last 6 months, how often was it easy to get the care, tests, or treatment you (your child) needed?

[45] In the last 6 months, how often did you (your child) get an appointment to see a specialist as soon as you needed?

## Children and Adolescents' Access to PCPs – 12 Months to 19 Years

*Findings* – HAN Total Population

Approximately 88 percent of HAN total members and comparison group members were compliant on this measure across the three years (Exhibit F-3). The compliance rate for both populations declined from 2019 to 2021.
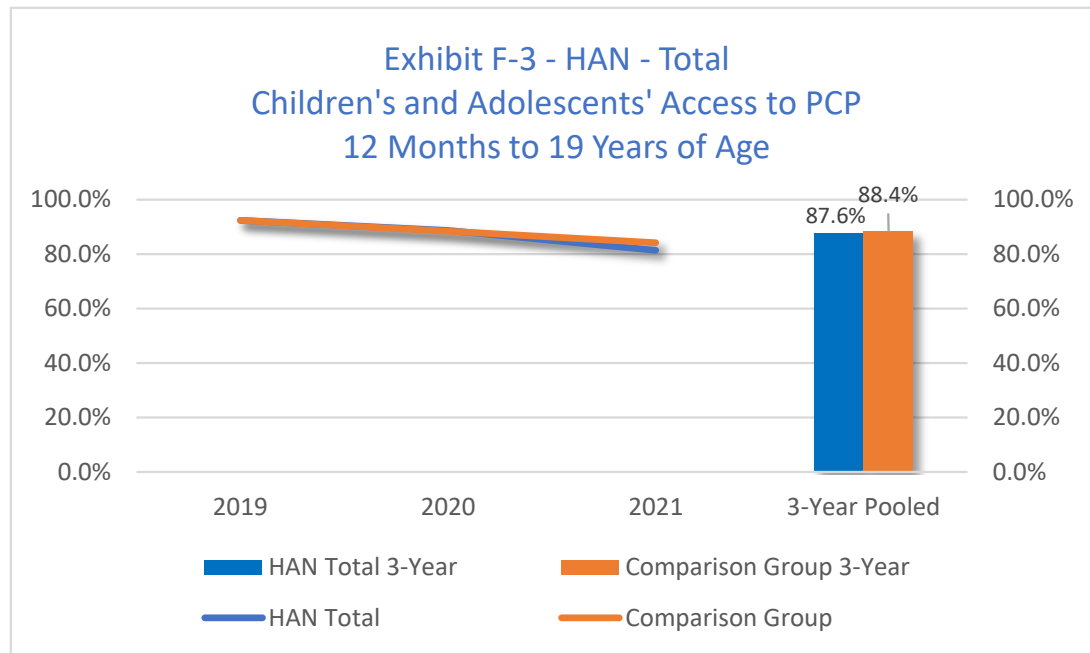


The difference between the HAN beneficiary and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-4)[46].

| Exhibit F-4 – HAN (Total) – Children's & Adolescents' Access to PCP – 12 Months to 19 Years | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 92.5% | 88.7% | 81.5% | 87.6% |
| Comparison Group | 92.4% | 88.5% | 84.3% | 88.4% |
| Difference | 0.1%‡ | 0.2%‡ | (2.8%)‡ | (0.8%)‡ |
| ‡ HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 115,344 CG – 170,615 | HAN-T – 139,861 CG – 212,741 | HAN-T – 180,406 CG – 235,907 | HAN-T – 435,611 CG – 619,263 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

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[46] The finding of statistical significance despite the small percentage difference is an artifact of the large population sizes for both groups.

*Findings* – HAN Care Managed Population

Approximately 96 percent of HAN Care Managed members and 90 percent of comparison group members were compliant on this measure across the three years (Exhibit F-5). The compliance rate for both populations declined from 2019 to 2021.



Exhibit F-5 - HAN - Care Managed
Children's and Adolescents' Access to PCP
12 Months to 19 Years of Age

The difference between the HAN Care Managed and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-6).

| Exhibit F-6 – HAN (Care Managed) – Children & Adolescents' Access to PCP – 12 Months to 19 Years | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Care Managed) | 99.0% | 95.8% | 93.5% | 96.1% |
| Comparison Group | 93.2% | 89.4% | 86.4% | 89.7% |
| Difference | 5.8%‡ | 6.4%‡ | 7.1%‡ | 6.4%‡ |
| ‡ HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-CM – 1,372 CG – 166,749 | HAN-CM – 1,812 CG – 212,007 | HAN-CM – 2,492 CG – 230,752 | HAN-CM – 5,676 CG – 609,508 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total rural subgroup compliance rate was slightly higher than the urban subgroup rate; both trended downward from 2019 to 2021. The HAN Care Managed urban and rural subgroup compliance rates were very similar; both also trended downward (Exhibit F-7).



Exhibit F-7 - HAN Urban/Rural Subgroups
Children's and Adolescents' Access to PCP
12 Months to 19 Years of Age

Note: Y-axis does not begin at 0.

|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 91.9% | 88.0% | 81.0% |
|  | **Rural** | 94.2% | 90.8% | 83.1% |
| HAN (Care Managed) | **Urban** | 98.9% | 95.7% | 93.5% |
|  | **Rural** | 99.3% | 96.2% | 93.6% |

## Adults' Access to Preventive/Ambulatory Health Services

*Findings* – HAN Total Population

Approximately 78 percent of HAN total members and 79 percent of comparison group members were compliant on this measure across the three years (Exhibit F-8). The compliance rate for both populations declined from 2019 to 2021.



Exhibit F-8 - HAN - Total
Adults' Access to Preventive/Ambulatory Health Services

The difference between the HAN total and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-9)[47].

| Exhibit F-9 – HAN (Total) – Adults' Access to Preventive/Ambulatory Health Services | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 84.6% | 79.5% | 69.3% | 77.8% |
| Comparison Group | 84.5% | 79.1% | 73.5% | 79.0% |
| Difference | 0.1%‡ | 0.4%‡ | (4.2%)‡ | (1.2%)‡ |
| ‡   HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 15,262 CG – 27,393 | HAN-T – 19,239 CG – 40,178 | HAN-T – 56,182 CG – 46,053 | HAN-T – 90,683 CG – 113,624 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

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[47] The finding of statistical significance despite the small percentage difference is an artifact of the large population sizes for both groups.

## *Findings* – HAN Care Managed Population

Approximately 95 percent of HAN Care Managed members and 83 percent of comparison group members were compliant on this measure across the three years (Exhibit F-10). The compliance rate for both populations declined from 2019 to 2021.
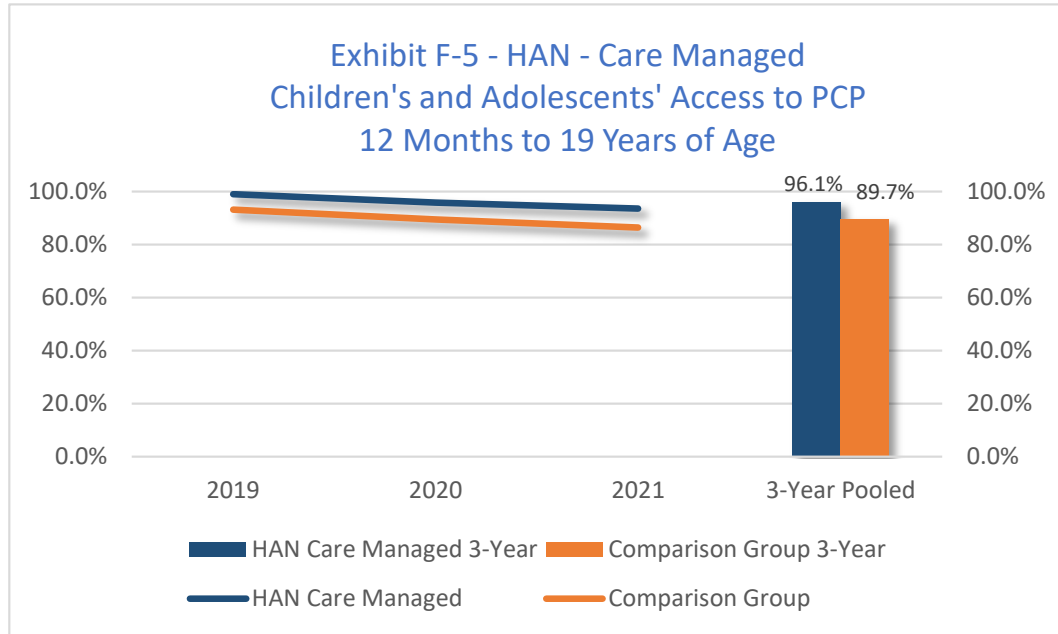


Exhibit F-10 - HAN - Care Managed
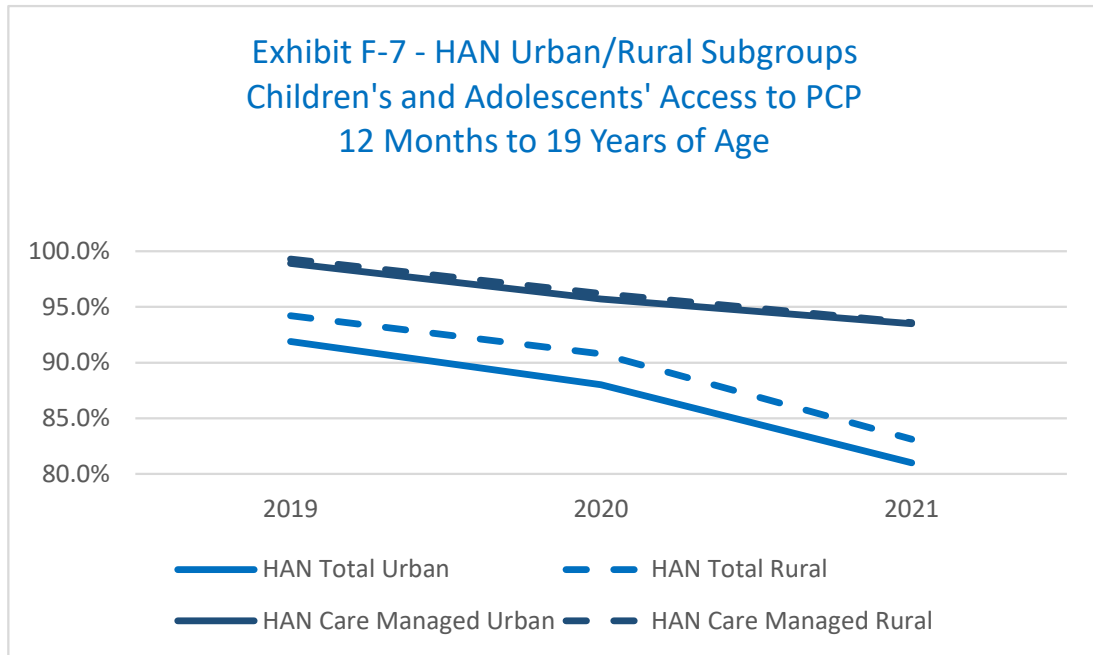Adults' Access to Preventive/Ambulatory Health Services

The difference between the HAN Care Managed and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-11).

| Exhibit F-11 – HAN (Care Managed) – Adults' Access to Preventive/ Ambulatory Health Services | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Care Managed) | 97.9% | 95.4% | 92.5% | 95.3% |
| Comparison Group | 87.5% | 83.4% | 79.4% | 83.4% |
| Difference | 10.4‡ | 12.0%‡ | 13.1%‡ | 11.9%‡ |
| ‡   HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-CM – 466 CG – 23,747 | HAN-CM – 495 CG – 33,622 | HAN-CM – 749 CG – 43,101 | HAN-CM – 1,710 CG – 100,470 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total urban and rural subgroups recorded similar compliance rates; both trended downward from 2019 to 2021. The HAN Care Managed urban and rural subgroups also recorded similar compliance rates and also trended downward, with the exception of the rural subgroup rate from 2019 to 2020 (Exhibit F-12).



Exhibit F-12 - HAN Urban/Rural Subgroups
Adults' Access to Preventive/Ambulatory Health Services
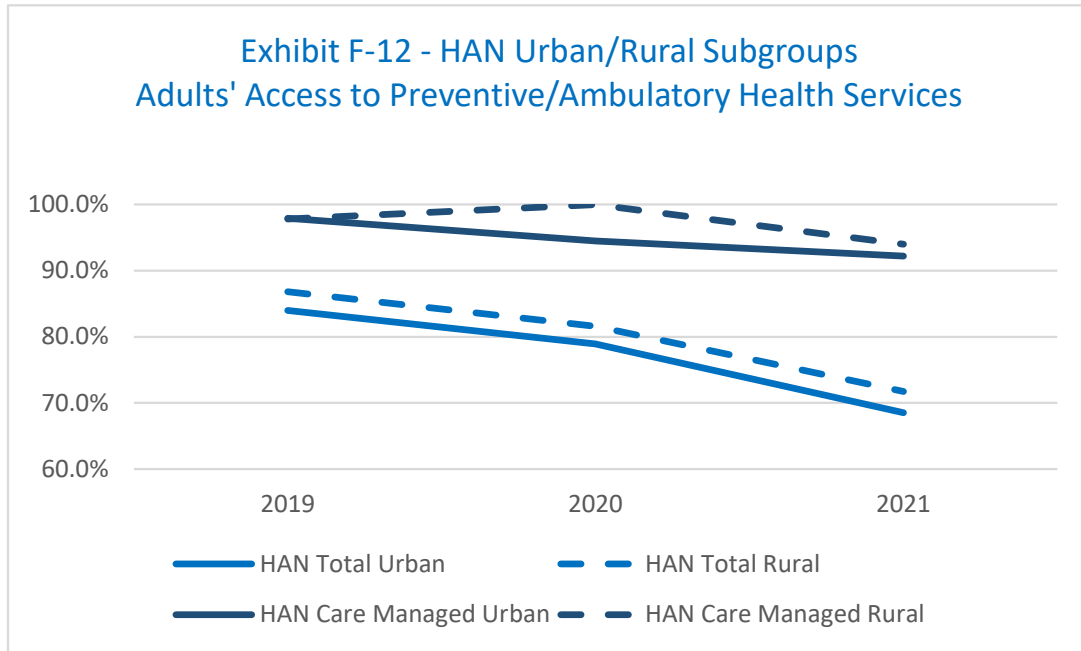
Note: Y-axis does not begin at 0.

|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 84.0% | 78.9% | 68.5% |
|  | **Rural** | 86.8% | 81.6% | 71.7% |
| HAN (Care Managed) | **Urban** | 97.9% | 94.5% | 92.2% |
|  | **Rural** | 97.8% | 100.0% | 94.0% |

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HAN total population in the prior waiver period (2016 to 2018).  The compliance rate declined from 96 percent in 2016 to approximately 69 percent in 2021 (Exhibit F-13). (Note that 2020 and 2021 include the period affected by the COVID-19 PHE.)

## Exhibit F-13 - HAN - Total - Prior and Current Periods
## Adults' Access to Preventive/Ambulatory Health Services
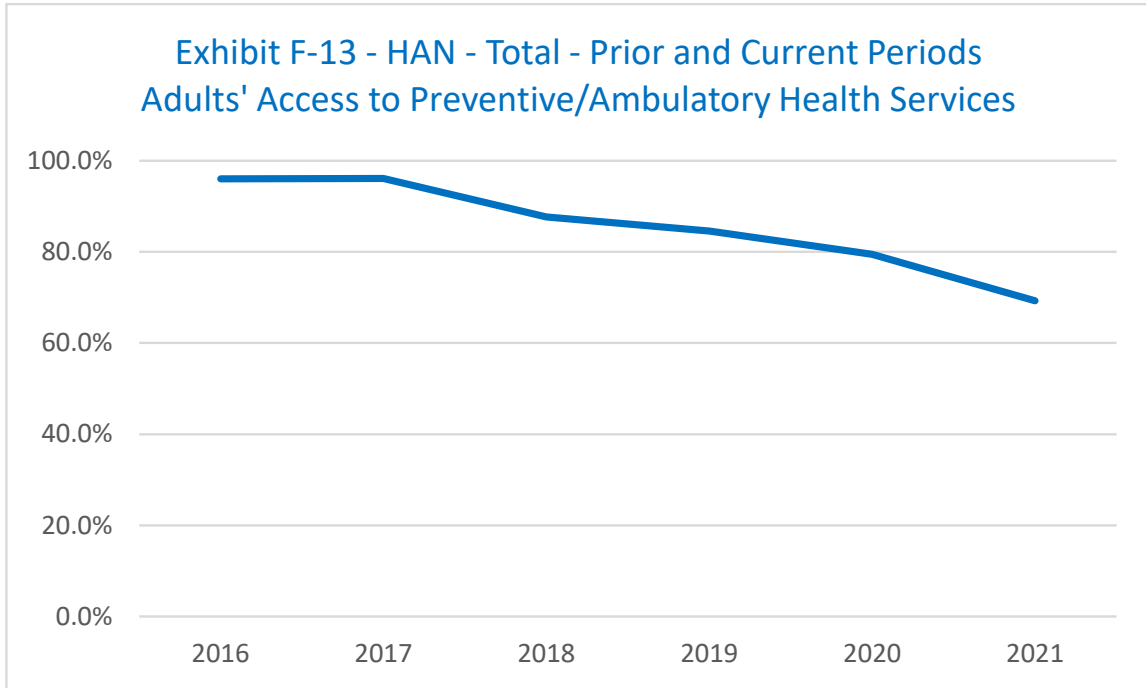


|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| HAN (Total) | 96.0% | 96.1% | 87.7% | 84.6% | 79.5% | 69.3% |

## Getting Needed Care – Children and Adults

*Findings* – HAN Total Population

Ninety percent of HAN adult members and approximately 85 percent of comparison group adult members reported always or usually being able to get needed care[48]. Approximately 90 percent of parents/caretakers of HAN child members and 88 percent of comparison group parents/caretakers reported always or usually being able to get needed care for their children (Exhibit F-14).

### Exhibit F-14 - HAN - Total
### Getting Needed Care - Always or Usually
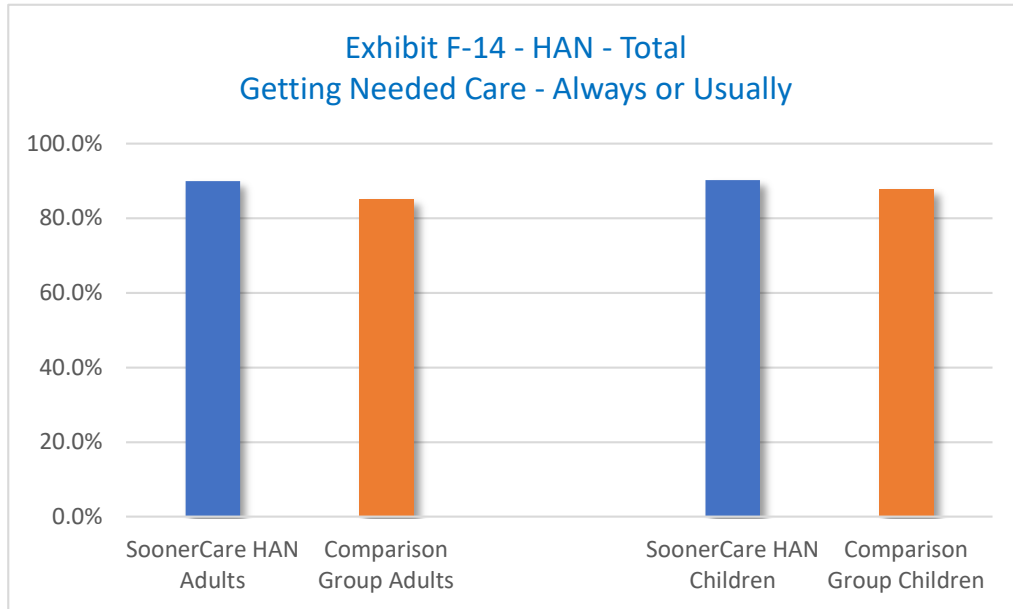


The difference between the HAN total and comparison group rates was not statistically significant for either group (Exhibit F-15).

| Exhibit F-15 – HAN (Total) – Getting Needed Care – Percent Responding Always or Usually | | |
|---|---|---|
| | Adults | Children |
| HAN (Total) | 90.0% | 90.2% |
| Comparison Group | 85.1% | 87.8% |
| Difference | 4.9% | 2.4% |
| ‡   HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | |

| Sample Sizes | Adults | HAN-T - 33 CG – 213 | Parents/Caretakers of Children | HAN-T - 283 CG – 668 |
|---|---|---|---|---|

Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance.

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[48] Composite measure (simple average) of two CAHPS survey questions: In the last six months, how often was it easy to get the care, tests or treatment you (your child) needed?  In the last 6 months, how often did you (your child) get an appointment to see a specialist as soon as you needed?

*Findings* – HAN Total Population and National Benchmark

The rate for SoonerCare HAN adults exceeded the 2021 national benchmark rate by approximately six percentage points.

The rate for SoonerCare HAN children exceeded the 2021 national benchmark rate by approximately five percentage points (Exhibit F-16).

(Caution: the benchmark population characteristics were not matched to the OHCA groups to minimize differences in the populations. The data is presented for informational purposes only.)



Exhibit F-16 - HAN - Total versus Benchmark
Getting Needed Care - Always or Usually
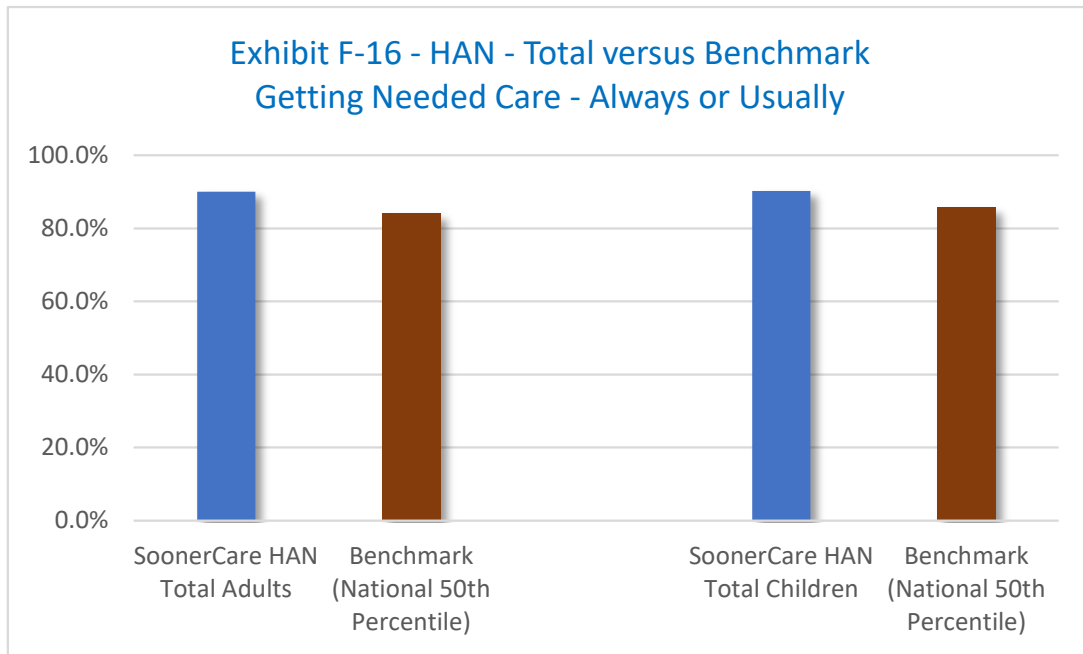
|  | HAN Adult | Benchmark | HAN Child | Benchmark |
|---|---|---|---|---|
| HAN (Total) | 90.0% | 84.1% | 90.2% | 85.7% |

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was calculated for the HAN total population in the 2018 CAHPS survey period. The percentage responding always or usually increased by seven percentage points among adults and approximately two percentage points among parents/caretakers of children (Exhibit F-17).
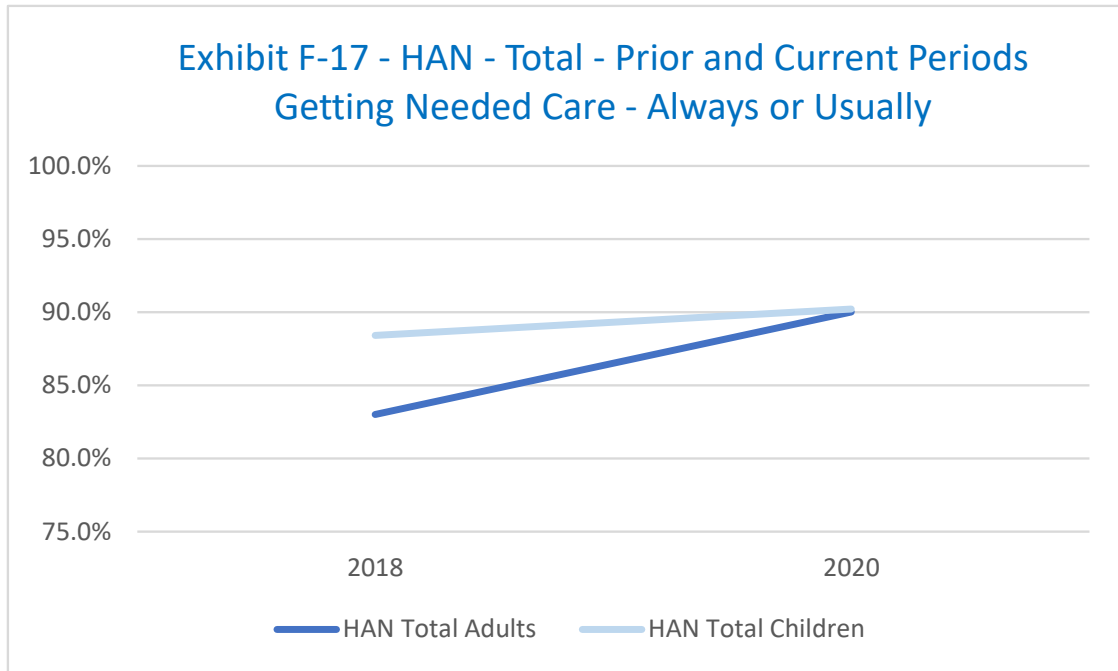


Note: Y-axis does not begin at 0.

| | HAN Adult 2018 | HAN Adult 2020 | HAN Child 2018 | HAN Child 2020 |
|---|---|---|---|---|
| HAN (Total) | 83.0% | 90.0% | 88.4% | 90.2% |

## HAN Access to Care – Summary

The SoonerCare HAN total and comparison group populations differed by a statistically significant amount on the two HEDIS preventive care measures, with the comparison group outperforming the HAN beneficiary population. The 2019 to 2021 trend for both measures was downward.

The SoonerCare HAN Care Managed member and comparison group populations also differed by a statistically significant amount on the two HEDIS preventive care measures, with the HAN population outperforming the comparison group. The 2019 to 2021 trend for both measures again was downward.

There was no statistically significant difference between the SoonerCare HAN total member and comparison group populations with respect to the CAHPS Getting Needed Care measure (Exhibit F-18).

### *Exhibit F-18 – HAN Access to Care Measures – Summary*

| Measures | HAN Total versus Comparison Group | HAN 2019-2021 Trend | HAN Care Managed versus Comparison Group | HAN Care Managed 2019 – 2021 Trend |
|---|---|---|---|---|
| Children and adolescents' access to PCPs – 12 months to 19 years | ✦ (red) | ▼ | ✦ (blue) | ▼ |
| Adults' access to preventive/ambulatory health services | ✦ (red) | ▼ | ✦ (blue) | ▼ |
| Getting needed care – children | ✦ (gray) | | | |
| Getting needed care – adults | ✦ (gray) | | | |

✦ (blue)    HAN exceeds comparison group by a statistically significant amount (3-year pooled)

✦ (gray)    No statistically significant difference (3-year pooled)

✦ (red)    Comparison group exceeds HAN by a statistically significant amount (3-year pooled)

▲    2019 – 2021 trend is upward

▼    2019 – 2021 trend is downward

## 2. *HAN Quality of Care*

### Overview

The OHCA, through its contracts with SoonerCare Health Access Networks, requires the HANs to promote improved quality of care by assisting affiliated PCMH providers to obtain higher levels of accreditation[49] and by undertaking care coordination/management of beneficiaries' "complex health care needs". The complex health care needs population includes individuals who are frequent users of the emergency room, individuals enrolled in the Medicaid pharmacy lock-in program and others with targeted chronic conditions, such as asthma and diabetes, and/or social service needs presenting potential barriers to care (social determinants of health).

Care management is defined to encompass outreach, follow-up and education to members and affiliated providers. Required activities include, among others:

- Providing education and care management to beneficiaries who are frequent users of the emergency room;
- Providing care coordination and care management to beneficiaries with complex/chronic conditions, such as persons with asthma or diabetes;
- Undertaking care management initiatives to improve health outcomes for targeted populations; and
- Establishing multi-disciplinary care management teams and engaging affiliated PCMH providers in discharge planning and care management initiatives.

### HAN Quality of Care Measures

Exhibit F-19 on the following page presents the HAN access to care measures and identifies:

- Data sources
- Subgroups evaluated (if any)
- Presence or absence of a national benchmark
- Presence or absence of comparative data from the prior Demonstration period

### Supporting Appendices

Appendix 2 contains CEM covariate balance tables for HEDIS measures. Appendix 3 contains statistical significance test results for HEDIS measures. Appendix 4 contains CEM covariate balance tables for CAHPS measures. Appendix 5 contains statistical significance tests results for CAHPS measures.  Appendix 6 contains the HAN member SDOH targeted survey instrument. Appendix 7 contains the HAN-aligned PCMH targeted survey instrument.

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[49] As described earlier, the SoonerCare PCMH program includes three tiers with escalating participation requirements related to access (e.g., office hours) and patient care management (e.g., contacting patients after an emergency room visit): 1 – Entry; 2 – Advanced; and 3 – Optimal.

## Exhibit F-19 - Quality of Care Measures - Overview

| Measures | Source | HAN Care Managed Subgroup | Geographic Subgroups | National Benchmark | Prior Period Data |
|---|---|---|---|---|---|
| **Number of HAN beneficiaries engaged in care management** Number of HAN members engaged in care management at any point during the measurement year. | OHCA | *Yes* | No | No | No |
| **Asthma – Medication Ratio** Percentage of members ages 5 to 18 and 19 to 64 who were identified as having persistent asthma and had a ratio of controller medications to total asthma medication of 0.50 or greater during the measurement year. | HEDIS | *Yes* | *Yes* | *Yes* | *Yes* |
| **Cardiovascular – Persistence of Beta Blocker Treatment after a Heart Attack** Percentage of members 18 years of age and older during the measurement year who were hospitalized and discharged from July 1 of the year prior to the measurement year to June 30 of the measurement year with a diagnosis of AMI and who received persistent beta-blocker treatment for six months after discharge. | HEDIS | *Yes* | *Yes* | No | No |
| **Cardiovascular – Cholesterol Management for Patients with Cardiovascular Conditions – LDL-C Test** Percentage of members 18 to 75 years of age with cardiovascular disease who had an LDL-C test during the measurement year. | HEDIS | *Yes* | *Yes* | No | No |
| **COPD – Use of Spirometry Testing in the Assessment and Diagnosis of COPD** Percentage of members 40 years of age and older with a new diagnosis of COPD or newly active COPD, who received appropriate spirometry testing to confirm the diagnosis. | HEDIS | *Yes* | *Yes* | No | No |

| Measures | Source | HAN Care Managed Subgroup | Geographic Subgroups | National Benchmark | Prior Period Data |
|---|---|---|---|---|---|
| **COPD – Pharmacotherapy Management of COPD Exacerbation – 14 Days and 30 Days** Percentage of COPD exacerbations for members 40 years of age and older who had an acute inpatient discharge or emergency room visit on or between January 1 to November 30 of the measurement year and who were dispensed a systemic corticosteroid (or there was evidence of an active prescription) within 14 days of the event and within 30 days of the event. | HEDIS | *Yes* | *Yes* | No | No |
| **Diabetes – Percentage of Members who had LDL-C Test** Percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who had LDL-C performed. | HEDIS | *Yes* | *Yes* | No | *Yes* |
| **Diabetes – Percentage of Members who had Retinal Eye Exam Performed** Percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who had retinal eye exam performed. | HEDIS | *Yes* | *Yes* | No | *Yes* |
| **Diabetes - Percentage of Members who had Hemoglobin A1c (HbA1c) Testing** Percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who had Hemoglobin A1c (HbA1c) testing performed. | HEDIS | *Yes* | *Yes* | No | *Yes* |
| **Diabetes - Percentage of Members who Received Medical Attention for Nephropathy** Percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who received medical attention for nephropathy. | HEDIS | *Yes* | *Yes* | No | *Yes* |
| **Hypertension – Percentage of Members who had LDL-C Test** Percentage of members 18 years of age and older with hypertension who had an LDL-C test performed. | HEDIS | *Yes* | *Yes* | No | *Yes* |

| Measures | Source | HAN Care Managed Subgroup | Geographic Subgroups | National Benchmark | Prior Period Data |
|---|---|---|---|---|---|
| **Hypertension – Percentage of Members Prescribed ACE/ARB Therapy** Percentage of members 18 years of age and older with hypertension who were prescribed angiotensin converting enzyme inhibitors or angiotensin receptor blockers (ACE/ARB therapy). | HEDIS | *Yes* | *Yes* | No | *Yes* |
| **Mental Health – Follow-up after Hospitalization for Mental Illness – 7 Days and 30 Days** Percentage of members 6 to 20 years of age and 21 years and older who were hospitalized for treatment of selected mental illness or intentional self-harm diagnoses and who had a follow-up visit with a mental health practitioner within seven days after discharge and within 30 days after discharge. | HEDIS-like[50] | No[51] | *Yes* | Yes | Yes |
| **Rating of Assistance with SDOH – Children and Adults** Rating of importance of help and satisfaction, among HAN members receiving assistance with social determinants of health (SDOH) | PHPG Targeted Survey | *Yes* | No | No | No |
| **Rating of Healthcare – Children and Adults** Rating of health care (or child's health care) in the last six months, using a scale from 0 to 10, where "0" represented the worst possible health care and "10" the best possible health care. | CAHPS | No | No | *Yes* | *Yes* |

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[50] Measures are "HEDIS-like", as the HEDIS specifications are based on counts of discharges and not unique member counts and the 1115 evaluation is based on a unique member count of those members with discharges, to accommodate minimum HAN and HMP enrollment tenures.
[51] Insufficient population size to perform 7-day or 30-day analysis.

| Measures | Source | HAN Care Managed Subgroup | Geographic Subgroups | National Benchmark | Prior Period Data |
|---|---|---|---|---|---|
| **Rating of Health Plan – Children and Adults** Rating of health plan (or child's health plan) in the last six months, using a scale from 0 to 10, where "0" represented the worst possible health plan and "10" the best possible health plan. | CAHPS | No | No | *Yes* | *Yes* |
| **Rating of Personal Doctor – Children and Adults** Rating of personal doctor (or child's personal doctor) in the last six months, using a scale from 0 to 10, where "0" represented the worst possible doctor and "10" the best possible doctor. | CAHPS | No | No | *Yes* | *Yes* |
| **PCMH Accreditation** Number and percentage of HAN-affiliated members aligned with a PCMH who has attained the highest level of OHCA accreditation[52]. | OHCA MMIS | No | No | No | *Yes* |
| **PCMH Provider Satisfaction – Practice Support** Provider satisfaction with HAN practice support activities | PHPG Targeted Survey | No | No | No | No |
| **PCMH Provider Satisfaction – Chronic Disease Guidelines** PCMH provider adoption of chronic care disease guidelines (self-reported) | PHPG Targeted Survey | No | No | No | No |

Methodology detail and sample sizes also are included at the bottom of exhibits containing the results of statistical significance tests between treatment (Demonstration) and comparison group populations.

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[52] The approved evaluation design description is for a simple count of providers by tier. The results instead are being reported based on HAN membership within each tier, to more accurately measure the relative importance of each tier within the HAN structure. (Practices in higher tiers, on average, are larger and serve more members.)

## Number of HAN Beneficiaries Engaged in Care Management

*Findings* – HAN Care Managed Population

The absolute number of SoonerCare HAN members engaged in care management increased from 2019 to 2021, while the rate per 1,000 members declined. Total HAN enrollment approximately doubled during the three-year period, which contributed to the decline in rate per 1,000 members (Exhibit F-20).



Exhibit F-20 - HAN - Care Managed Number and Rate per 1,000 Members
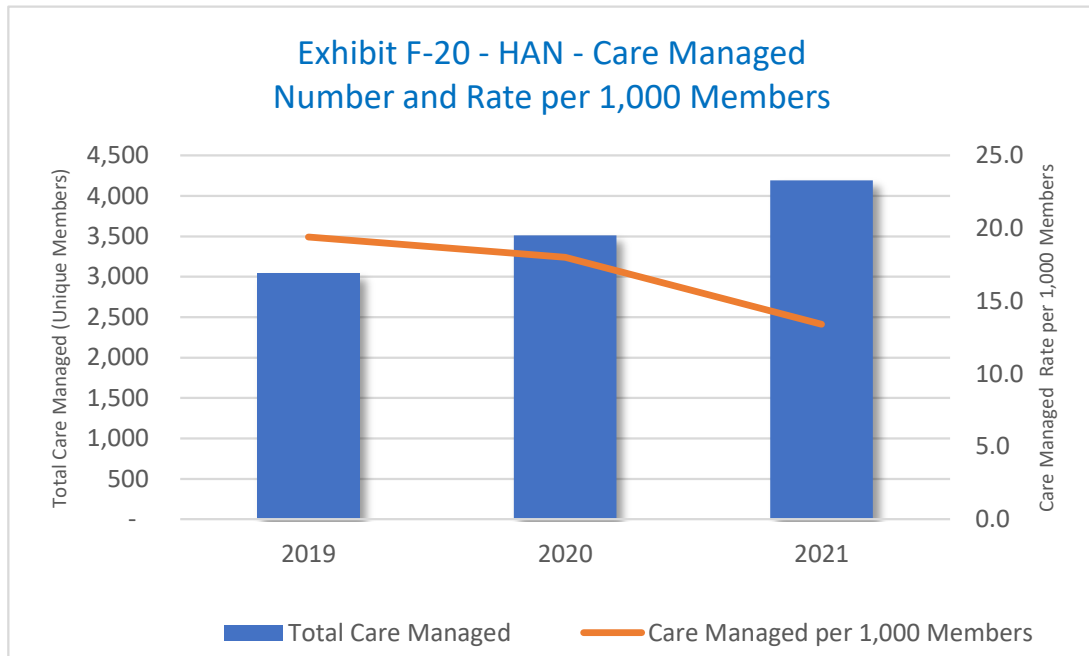
|  | 2019 | 2020 | 2021 |
|---|---|---|---|
| Total Care Managed | 3,037 | 3,511 | 4,192 |
| Care Managed per 1,000 Members | 19.4 | 18.0 | 13.4 |

## Asthma – Medication Ratio – Ages 5 to 18

*Findings* – HAN Total Population

Approximately 83 percent of HAN total members and 86 percent of comparison group members were compliant on this measure across the three years (Exhibit F-21). The compliance rate for both populations rose from 2019 to 2021.



Exhibit F-21 - HAN - Total
Asthma - Medication Ratio - 5 to 18 Years of Age

The difference between the HAN total and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-22).

| Exhibit F-22 – HAN (Total) – Asthma – Medication Ratio – 5 to 18 Years of Age | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 77.9% | 81.3% | 90.8% | 83.3% |
| Comparison Group | 80.0% | 85.3% | 92.4% | 85.9% |
| Difference | (2.1%)‡ | (4.0%)‡ | (1.6%)‡ | (2.6%)‡ |
| ‡ HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 4,231 CG – 6,363 | HAN-T – 5,018 CG – 7,748 | HAN-T – 6,528 CG – 8,752 | HAN-T – 15,777 CG – 22,864 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Care Managed Population

Approximately 88 percent of HAN Care Managed members and approximately 86 percent of comparison group members were compliant on this measure across the three years (Exhibit F-23). The compliance rate for both populations rose from 2019 to 2021.
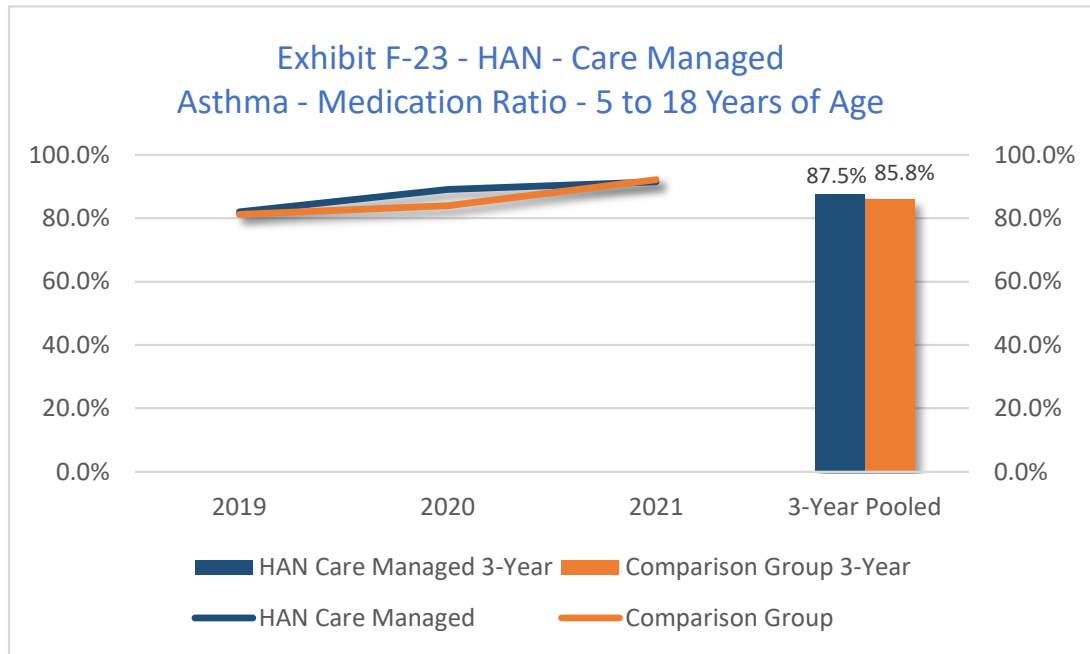


Exhibit F-23 - HAN - Care Managed
Asthma - Medication Ratio - 5 to 18 Years of Age

The difference between the HAN Care Managed and comparison group compliance rates was not statistically significant in any of the individual years. It also was not statistically significant for the three-year pooled data (Exhibit F-24).

| Exhibit F-24 – HAN (Care Managed) – Asthma – Medication Ratio – 5 to 18 Years of Age | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Care Managed) | 82.0% | 89.1% | 91.5% | 87.5% |
| Comparison Group | 81.2% | 84.0% | 92.2% | 85.8% |
| Difference | 0.8% | 5.1% | (0.7%) | 1.7% |
| ‡ HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-CM – 43 CG – 6,197 | HAN-CM – 54 CG – 7,716 | HAN-CM – 75 CG – 8,752 | HAN-CM – 171 CG – 22,665 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total rural subgroup rate exceeded the urban rate in 2019 and 2020, while the urban subgroup rate exceeded the rural rate in 2021. Both subgroups trended upward from 201 to 2021 (Exhibit F-25).



Exhibit F-25 - HAN Urban/Rural Subgroups
Asthma - Medication Ratio - 5 to 18 Years of Age
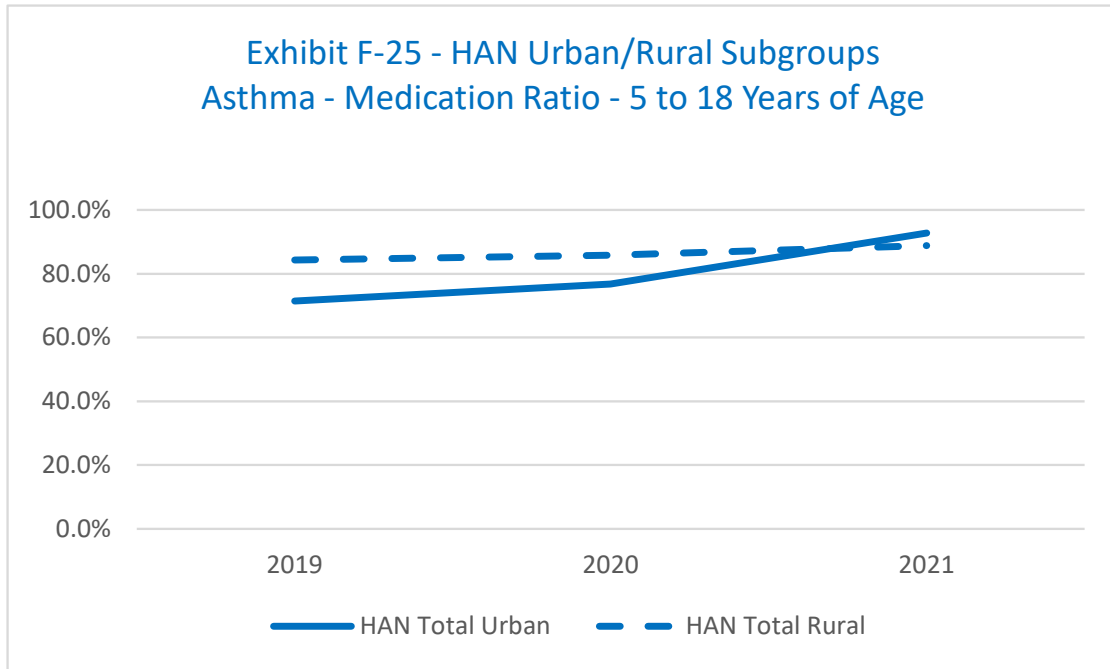
|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 71.5% | 76.8% | 92.8% |
|  | **Rural** | 84.3% | 85.8% | 88.8% |

The HAN Care Managed urban and rural subgroups were not sufficient in size to produce reliable trendlines.

*Findings* – HAN Total and Care Managed Populations and National Benchmark

The three-year pooled rate for the SoonerCare HAN total population exceeded the national benchmark rate by approximately 15 percentage points. The three-year pooled rate for the SoonerCare HAN Care Managed population exceeded the national benchmark rate by approximately 19 percentage points (Exhibit F-26).

(Caution: the benchmark population characteristics were not matched to the OHCA groups to minimize differences in the populations. The data is presented for informational purposes only.)



Exhibit F-26 - HAN versus Benchmark
Asthma Medication Ratio - 5 to 18 Years of Age
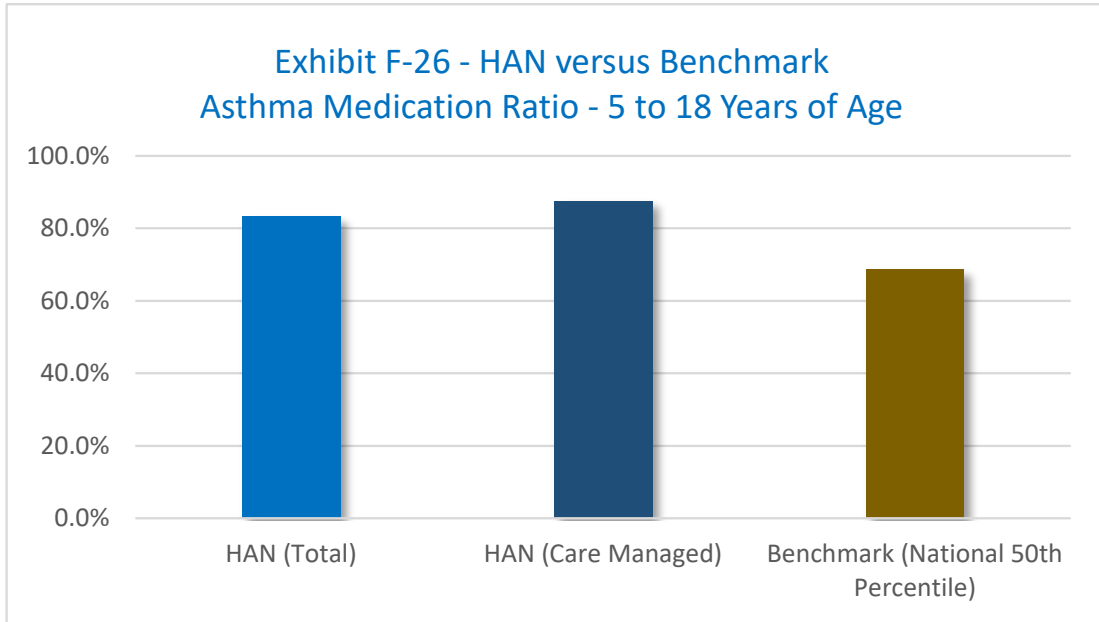
|  | HAN Total | HAN Care Managed | Benchmark |
|---|---|---|---|
| Compliance Rate | 83.3% | 87.5% | 68.6% |

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HAN total population in the prior waiver period (2016 to 2018).  The compliance rate rose from 76 percent 2016 to approximately 91 percent in 2021 (Exhibit F-27).



Exhibit F-27 - HAN - Total - Prior and Current Periods Asthma - Medication Ratio - 5 to 18 Years of Age
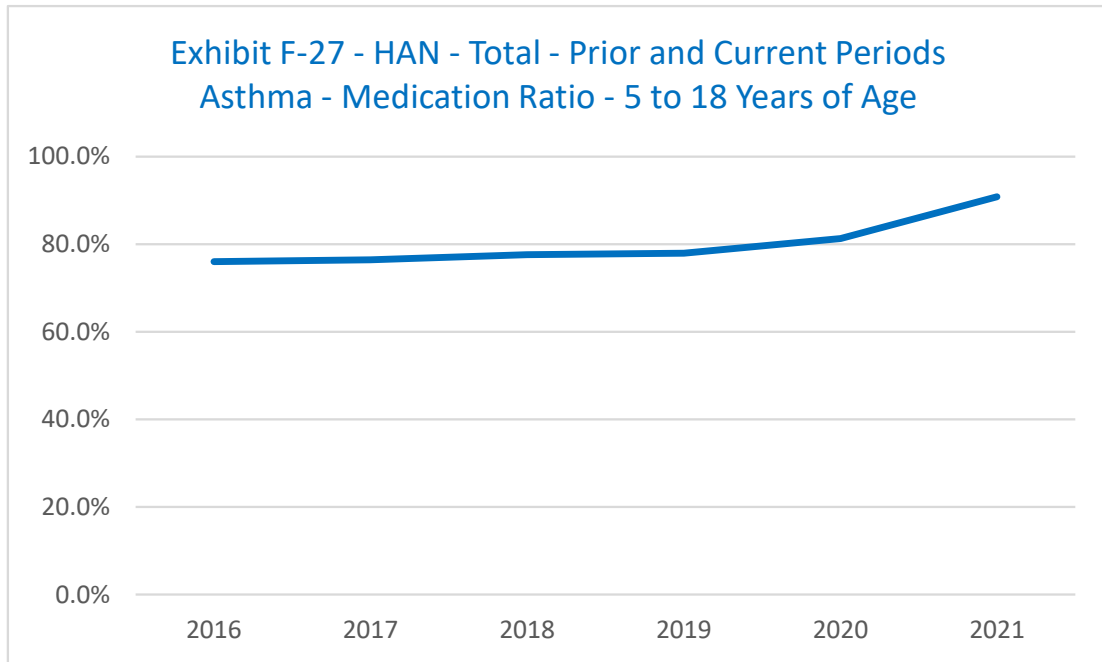
|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| HAN (Total) | 76.0% | 76.4% | 77.6% | 77.9% | 81.3% | 90.8% |

## Asthma – Medication Ratio – Ages 19 to 64

*Findings* – HAN Total Population

Approximately 75 percent of HAN total members and approximately 78 percent of comparison group members were compliant on this measure across the three years (Exhibit F-28). The compliance rate for the HAN total population rose from 2019 to 2021. The compliance rate for the comparison group declined from 2019 to 2020 and rose from 2020 to 2021.



Exhibit F-28 - HAN - Total
Asthma - Medication Ratio - 19 to 64 Years of Age
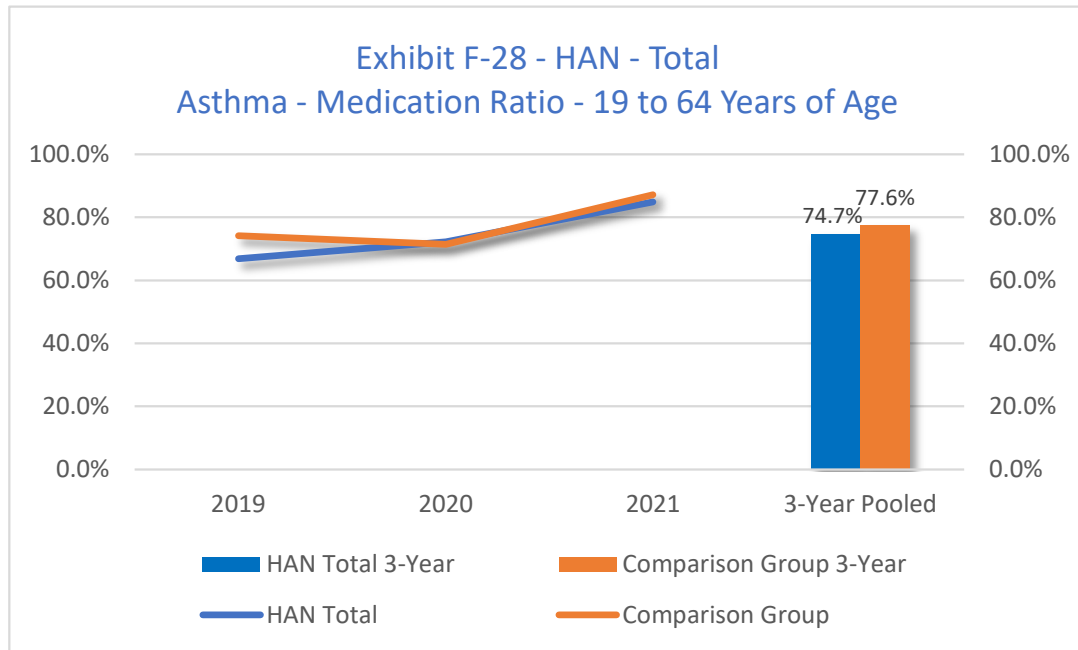
The difference between the HAN total and comparison group compliance rates was statistically significant in 2019 and 2021. It also was statistically significant for the three-year pooled data (Exhibit F-29).

| Exhibit F-29 – HAN (Total) – Asthma – Medication Ratio – 19 to 64 Years of Age | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 66.9% | 72.2% | 84.9% | 74.7% |
| Comparison Group | 74.1% | 71.4% | 87.2% | 77.6% |
| Difference | (7.2%)‡ | 0.8% | (2.3%)‡ | (2.9%)‡ |
| ‡  HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 803 CG – 1,392 | HAN-T – 1,127 CG – 2,313 | HAN-T – 3,258 CG – 2,848 | HAN-T – 5,188 CG – 6,553 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Care Managed Population

Approximately 74 percent of HAN Care Managed members and 78 percent of comparison group members were compliant on this measure across the three years (Exhibit F-30.) The compliance rate for both populations declined from 2019 to 2020 and rose from 2020 to 2021.



The difference between the HAN Care Managed and comparison group compliance rates was not statistically significant in any of the individual years. It also was not statistically significant for the three-year pooled data (Exhibit F-31).

| Exhibit F-31 – HAN (Care Managed) – Asthma – Medication Ratio – 19 to 64 Years of Age | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Care Managed) | 75.0% | 63.6% | 82.1% | 73.6% |
| Comparison Group | 74.0% | 73.9% | 87.1% | 78.3% |
| Difference | 1.0% | (10.3%) | (5.0%) | (4.7%) |
| ‡   HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-CM – 24 CG – 1,161 | HAN-CM – 26 CG – 1,987 | HAN-CM – 40 CG – 2,621 | HAN-CM – 90 CG – 5,769 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total rural subgroup rate exceeded the urban rate in all three years. The compliance rate for both subgroups trended upward from 2019 to 2021 (Exhibit F-32).



Exhibit F-32 - HAN Urban/Rural Subgroups
Asthma - Medication Ratio - 19 to 64 Years of Age
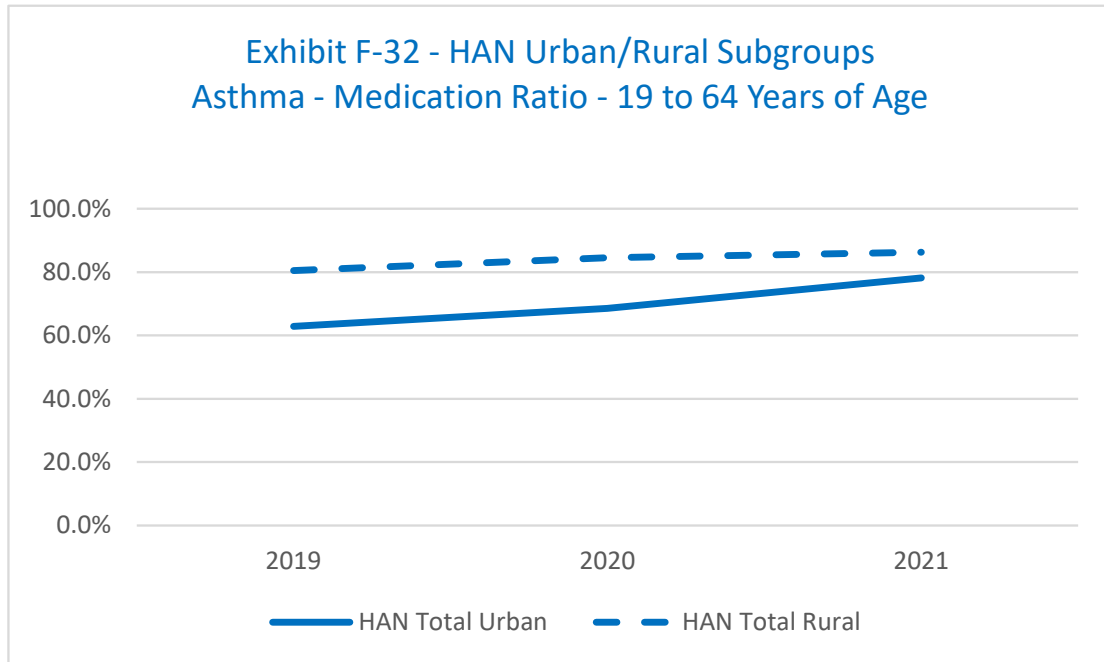
|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 62.9% | 68.5% | 78.1% |
|  | **Rural** | 80.5% | 84.6% | 86.3% |

The HAN Care Managed urban and rural subgroups were not sufficient in size to produce reliable trendlines.

*Findings* – HAN Total and Care Managed Populations and National Benchmark

The three-year pooled rate for the SoonerCare HAN total population exceeded the national benchmark rate by 21 percentage points. The three-year pooled rate for the SoonerCare HAN Care Managed population exceeded the national benchmark rate by approximately 20 percentage points (Exhibit F-33).

(Caution: the benchmark population characteristics were not matched to the OHCA groups to minimize differences in the populations. The data is presented for informational purposes only.)

**Exhibit F-33 - HAN versus Benchmark**
**Asthma Medication Ratio - 19 to 64 Years of Age**
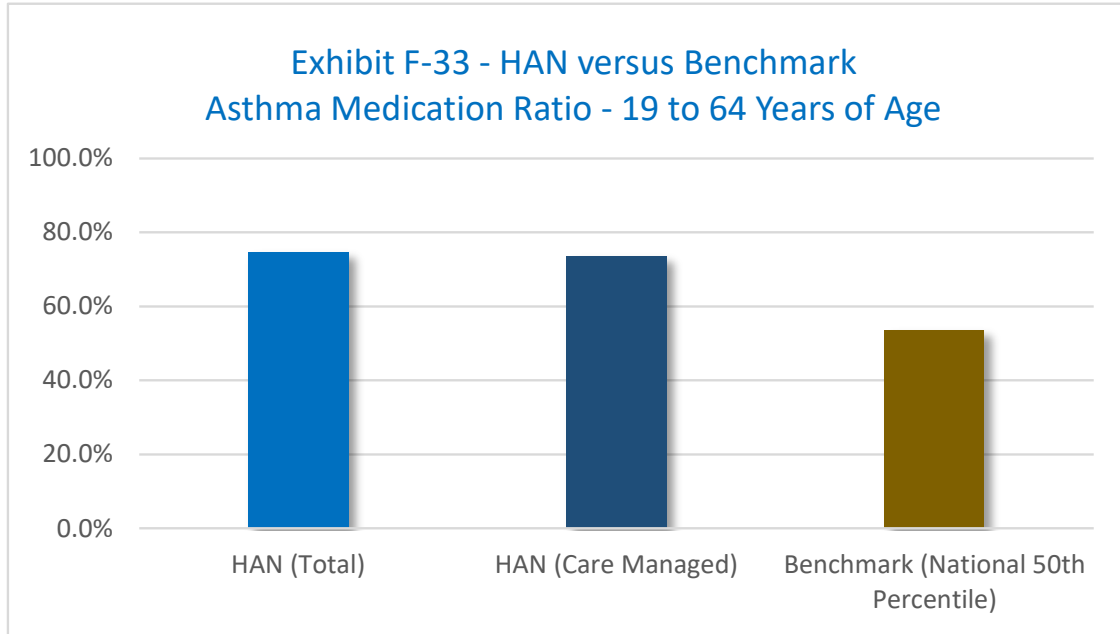
|  | HAN Total | HAN Care Managed | Benchmark |
|---|---|---|---|
| Compliance Rate | 74.7% | 73.6% | 53.7% |

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HAN total population in the prior waiver period (2016 to 2018). The compliance rate rose from approximately 58 percent in 2016 to 85 percent in 2021 (Exhibit F-34).

**Exhibit F-34 - HAN - Total - Prior and Current Periods**
**Asthma - Medication Ratio - 19 to 64 Years of Age**
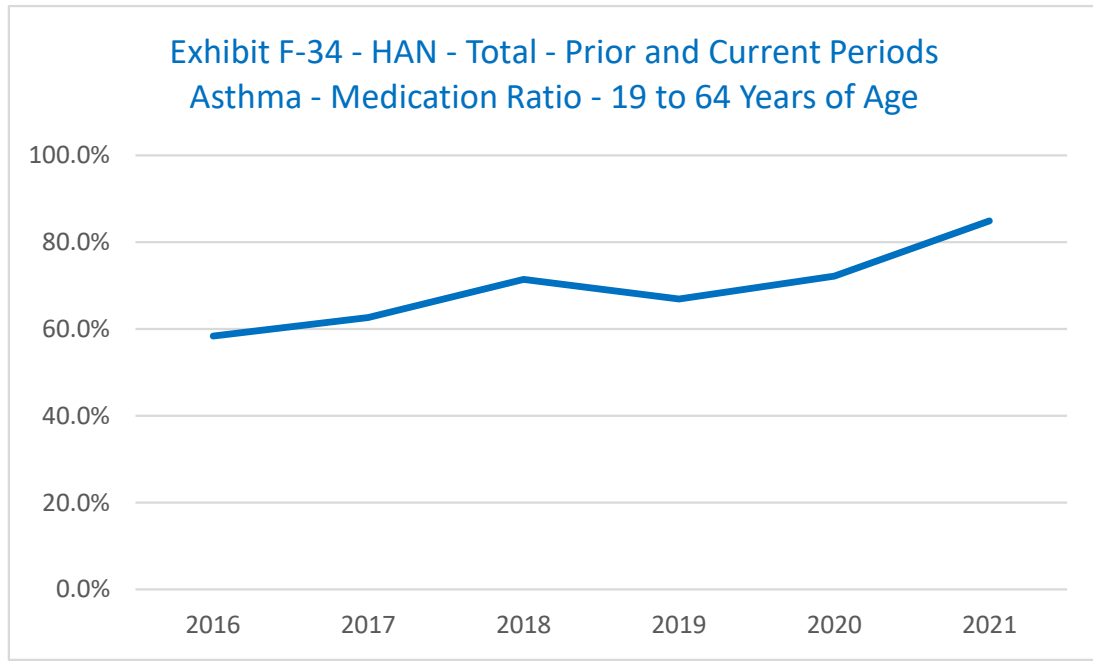


|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| HAN (Total) | 58.4% | 62.6% | 71.4% | 66.9% | 72.2% | 84.9% |

## Coronary Artery Disease – Persistent Beta Blocker Treatment after a Heart Attack

*Findings* – HAN Total Population

Approximately 40 percent of HAN total members and 47 percent of comparison group members were compliant on this measure across the three years (Exhibit F-35). The compliance rate for the HAN population was stable from 2019 to 2021. The compliance rate for the comparison group rose from 2019 to 2020 before declining slightly from 2020 to 2021.



Exhibit F-35 - HAN - Total
CAD - Beta Blocker after Heart Attack

The difference between the HAN total and comparison group compliance rates was statistically significant in 2020 and 2021. It also was statistically significant for the three-year pooled data (Exhibit F-36).

| Exhibit F-36 – HAN (Total) – CAD – Beta Blocker after Heart Attack | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 41.7% | 38.8% | 39.9% | 40.1% |
| Comparison Group | 43.5% | 50.5% | 47.2% | 47.1% |
| Difference | (1.8%) | (11.7%)‡ | (7.3%)‡ | (7.0%)‡ |
| ‡ HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 393 CG – 852 | HAN-T – 361 CG – 772 | HAN-T – 501 CG – 764 | HAN-T – 1,255 CG – 2,388 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Care Managed Population

Approximately 39 percent of HAN Care Managed members and approximately 46 percent of comparison group members were compliant on this measure across the three years (Exhibit F-37). The compliance rate for HAN members declined from 2019 to 2020 before rising again from 2020 to 2021. The compliance rate for the comparison group rose from 2019 to 2020 and was unchanged from 2020 to 2021.



Exhibit F-37 - HAN - Care Managed
CAD - Beta Blocker after Heart Attack

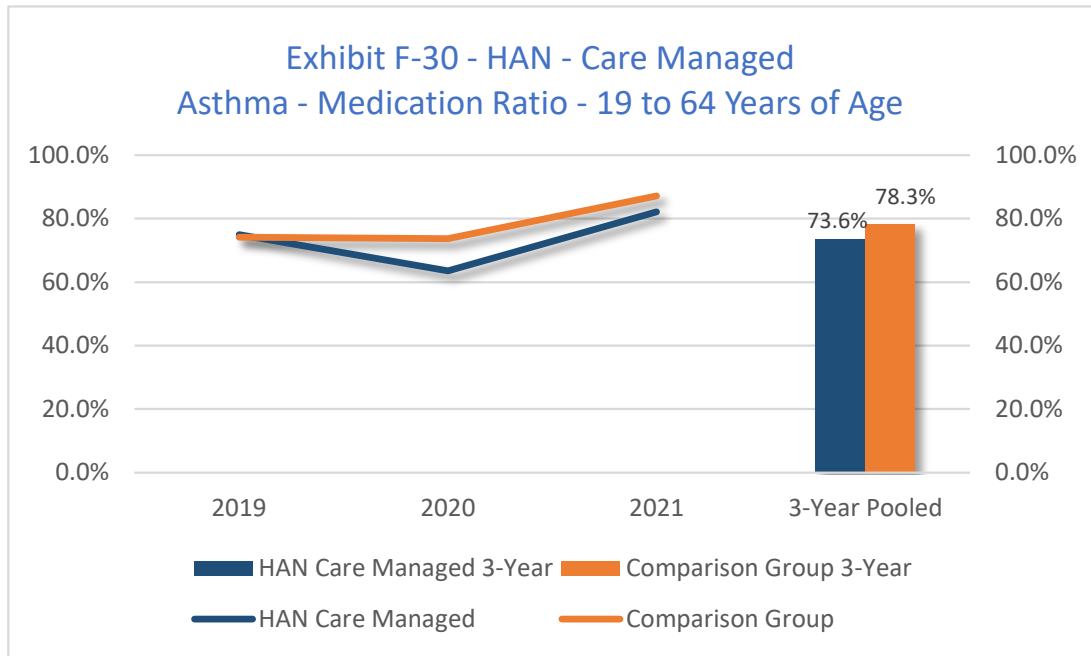The difference between the HAN Care Managed and comparison group compliance rates was statistically significant in 2020. It was not statistically significant for the three-year pooled data (Exhibit F-38).

| Exhibit F-38 – HAN (Care Managed) – CAD – Beta Blocker after Heart Attack | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Care Managed) | 45.1% | 30.6% | 42.9% | 39.5% |
| Comparison Group | 42.8% | 48.8% | 48.8% | 46.8% |
| Difference | 2.3% | (18.2%)‡ | (5.9%) | (7.3%) |
| ‡   HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-CM – 51 CG – 566 | HAN-CM – 36 CG – 526 | HAN-CM – 49 CG – 439 | HAN-CM – 136 CG – 1,531 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total rural subgroup rate exceeded the urban rate in 2020; the two subgroups had nearly equal rates in 2019 and 2021. The rural subgroup rate trended upward from 2019 to 2020 and downward from 2020 to 2021; the urban subgroup rate trended slightly downward from 2019 to 2020 and slightly upward from 2020 to 2021 (Exhibit F-39).

**Exhibit F-39 - HAN Urban/Rural Subgroups**
**CAD - Beta Blocker after Heart Attack**
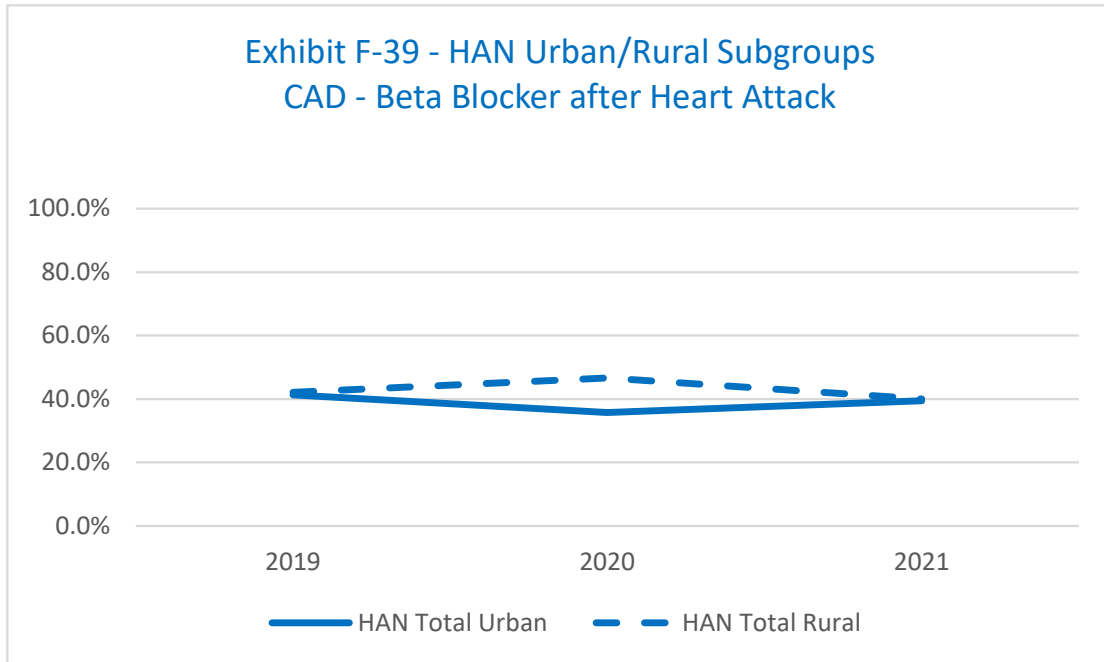


|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 41.3% | 35.8% | 39.5% |
|  | **Rural** | 42.1% | 46.7% | 40.0% |

The HAN Care Managed urban and rural subgroups were not sufficient in size to produce reliable trendlines.

## Coronary Artery Disease – Cholesterol Management – LDL-C Test

*Findings* – HAN Total Population

Fifty-six percent of HAN total members and approximately 58 percent of comparison group members were compliant on this measure across the three years (Exhibit F-40). The compliance rate for the HAN population declined from 2019 to 2020 before rising again from 2020 to 2021. The compliance rate for the comparison group was stable across the three years.



The difference between the HAN total and comparison group compliance rates was statistically significant in 2021. It was not statistically significant for the three-year pooled data (Exhibit F-41).

| Exhibit F-41 – HAN (Total) – CAD – Cholesterol Management – LDL-C Test | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 62.8% | 51.5% | 53.7% | 56.0% |
| Comparison Group | 57.9% | 57.7% | 59.0% | 58.2% |
| Difference | 4.9% | (6.2%) | (5.3%)‡ | (2.2%) |
| ‡   HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 393 CG – 852 | HAN-T – 361 CG – 772 | HAN-T – 501 CG – 764 | HAN-T – 1,255 CG – 2,388 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Care Managed Population

Approximately 56 percent of HAN Care Managed members and 58 percent of comparison group members were compliant on this measure across the three years (Exhibit F-42). The compliance rate for HAN members declined from 2019 to 2021. The compliance rate for the comparison group declined slightly from 2019 to 2020 before rising again from 2020 to 2021.



Exhibit F-42 - HAN - Care Managed
CAD - Cholesterol Management - LDL-C Test

The difference between the HAN Care Managed and comparison group compliance rates was not statistically significant in any of the individual years. It also was not statistically significant for the three-year pooled data (Exhibit F-43).

| Exhibit F-43 – HAN (Care Managed) – CAD – Cholesterol Management – LDL-C Test | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Care Managed) | 64.7% | 55.6% | 46.9% | 55.7% |
| Comparison Group | 57.9% | 57.1% | 59.2% | 58.1% |
| Difference | 6.8% | (1.5%) | (12.3%) | (2.4%) |
| ‡   HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-CM – 51 CG – 566 | HAN-CM – 36 CG – 526 | HAN-CM – 49 CG – 439 | HAN-CM – 136 CG – 1,531 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total urban and rural subgroups had nearly equal rates in 2019 and 2020; the rural rate exceeded the urban rate in 2021. The rural subgroup rate trended downward from 2019 to 2020 and upward from 2020 to 2021; the urban subgroup rate trended downward from 2019 to 2020 and was nearly unchanged from 2020 to 2021 (Exhibit F-44).



Exhibit F-44 - HAN Urban/Rural Subgroups
CAD - Cholesterol Management - LDL-C Test
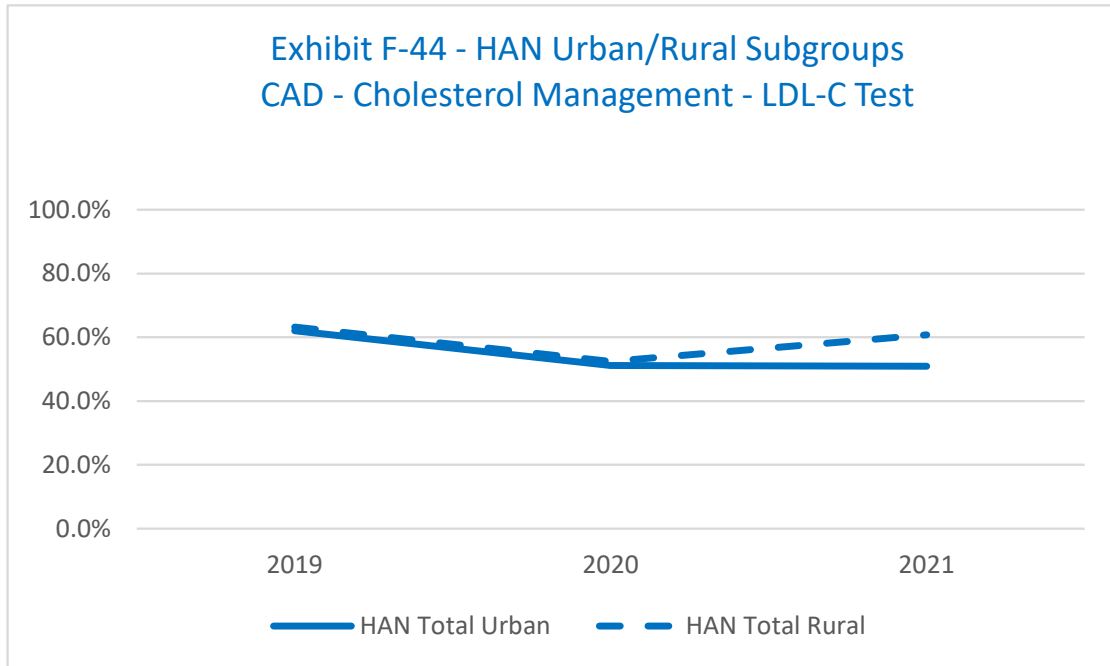
|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 62.1% | 51.2% | 50.9% |
|  | **Rural** | 63.2% | 52.4% | 60.8% |

The HAN Care Managed urban and rural subgroups were not sufficient in size to produce reliable trendlines.

# Chronic Obstructive Pulmonary Disease – Use of Spirometry Testing

*Findings* – HAN Total Population

Approximately 25 percent of HAN total members and 24 percent of comparison group members were compliant on this measure across the three years (Exhibit F-45). The compliance rate for both populations rose from 2019 to 2020 before declining from 2020 to 2021.
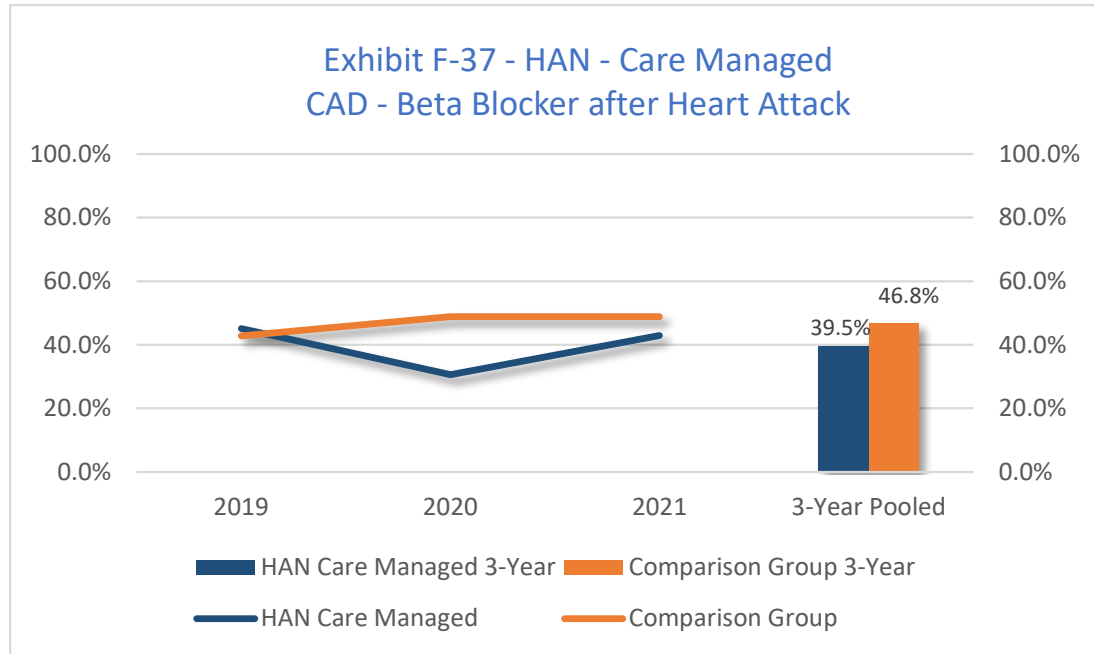


Exhibit F-45 - HAN - Total
COPD - Use of Spirometry Testing

The difference between the HAN total and comparison group compliance rates was statistically significant in 2020. It was not statistically significant for the three-year pooled data (Exhibit F-46).

| Exhibit F-46 – HAN (Total) – COPD – Use of Spirometry Testing | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 23.3% | 37.5% | 13.5% | 24.8% |
| Comparison Group | 22.2% | 33.3% | 15.5% | 23.7% |
| Difference | 1.1% | 4.2%‡ | (2.0%) | 1.1% |
| ‡   HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 446 CG – 785 | HAN-T – 715 CG – 1,020 | HAN-T – 945 CG – 1,102 | HAN-T – 2,106 CG – 2,907 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Care Managed Population

Approximately 24 percent of HAN Care Managed members and 21 percent of comparison group members were compliant on this measure across the three years (Exhibit F-47). The compliance rate for HAN members declined from 2019 to 2021. The compliance rate for the comparison group rose from 2019 to 2020 before declining from 2020 to 2021.



Exhibit F-47 - HAN - Care Managed
COPD - Use of Spirometry Testing
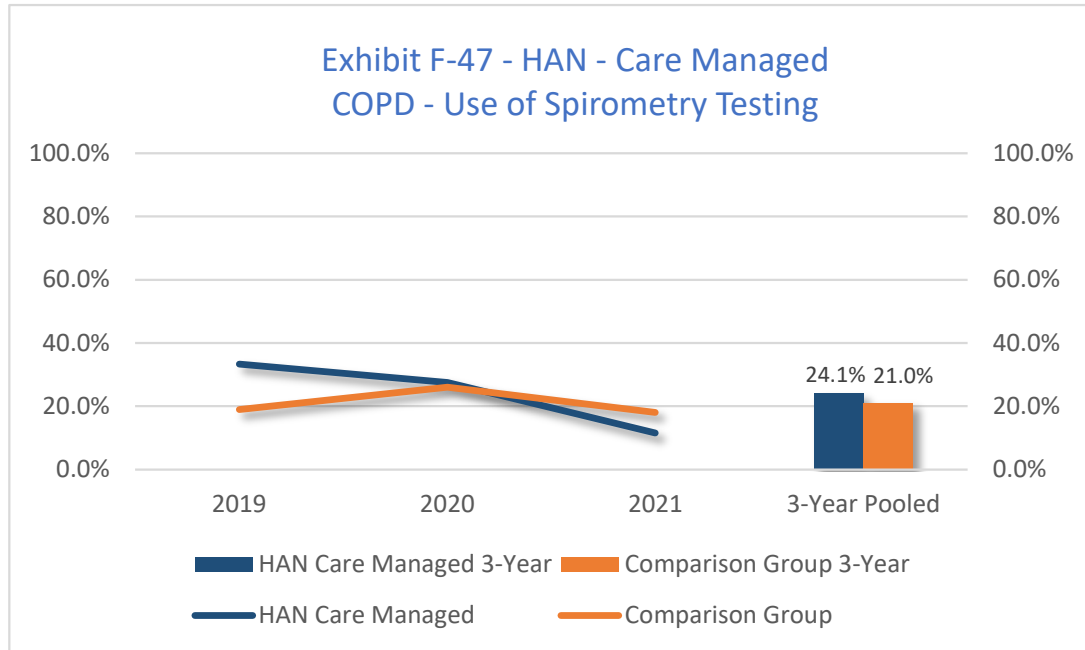
The difference between the HAN Care Managed and comparison group compliance rates was not statistically significant in any of the individual years. It also was not statistically significant for the three-year pooled data (Exhibit F-48).

| Exhibit F-48 – HAN (Care Managed) – COPD – Use of Spirometry Testing | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Care Managed) | 33.3% | 27.5% | 11.6% | 24.1% |
| Comparison Group | 19.0% | 26.0% | 18.1% | 21.0% |
| Difference | 14.3% | 1.5% | (6.5%) | 3.1% |
| ‡   HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-CM – 24 CG – 379 | HAN-CM – 40 CG – 439 | HAN-CM – 43 CG – 363 | HAN-CM – 107 CG – 1,181 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total urban subgroup rate exceeded the rural rate in 2019 and 2020; the two subgroups had nearly equal rates in 2021. The rates for both subgroups trended upward from 2019 to 2020 and downward from 2020 to 2021 (Exhibit F-49).

**Exhibit F-49 - HAN Urban/Rural Subgroups**
**COPD - Use of Spirometry Testing**
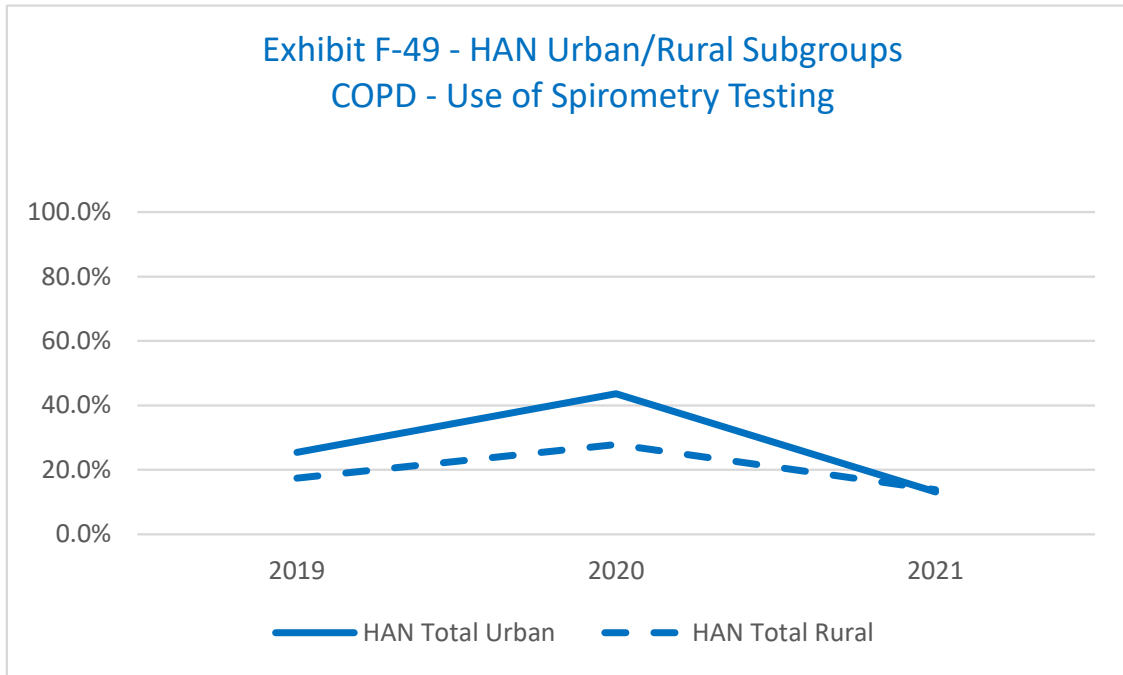


|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 25.4% | 43.6% | 13.1% |
| | **Rural** | 17.4% | 27.9% | 13.9% |

The HAN Care Managed urban and rural subgroups were not sufficient in size to produce reliable trendlines.

# Chronic Obstructive Pulmonary Disease – Pharmacotherapy Management of Exacerbation – 14 Days

*Findings* – HAN Total Population

Approximately 63 percent of HAN total members and 67 percent of comparison group members were compliant on this measure across the three years (Exhibit F-50). The compliance rate for the HAN total population declined from 2019 to 2020 before rising again from 2020 to 2021. The compliance rate for the comparison group was stable from 2019 to 2020 and rose from 2020 to 2021.
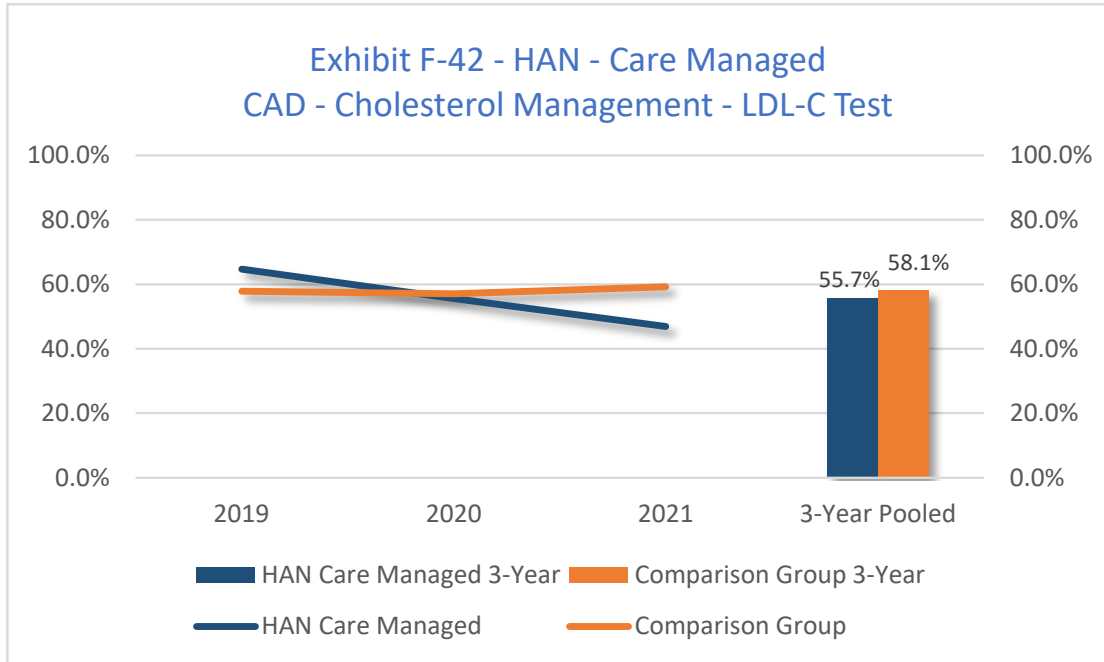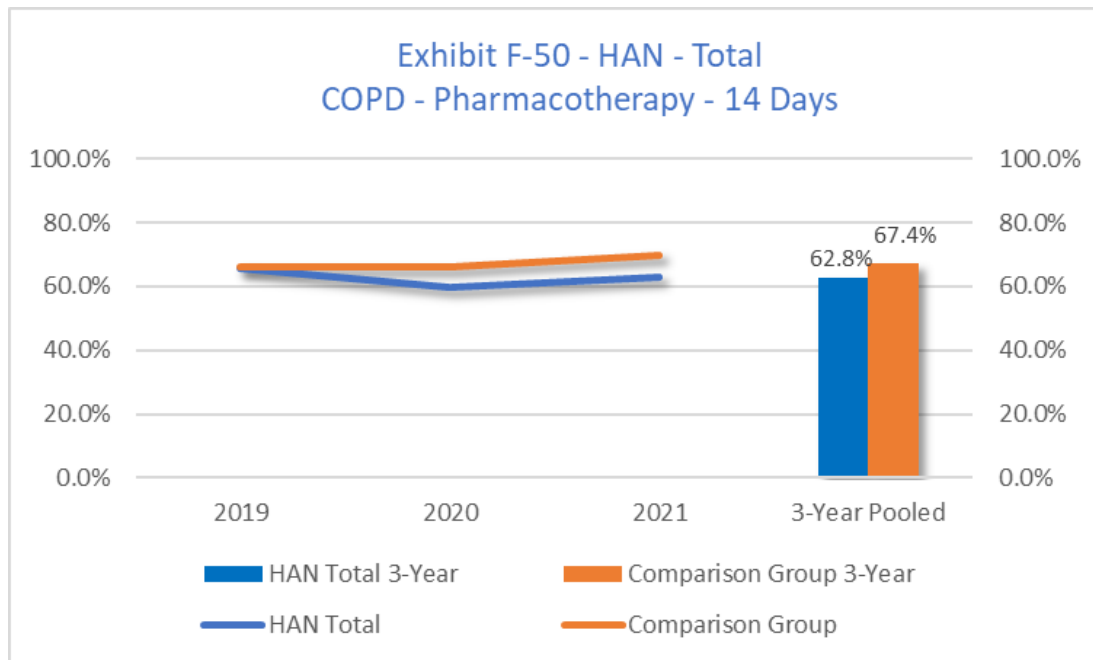


Exhibit F-50 - HAN - Total
COPD - Pharmacotherapy - 14 Days

The difference between the HAN total and comparison group compliance rates was not statistically significant in any of the individual years. However, it was statistically significant for the three-year pooled data (Exhibit F-51).

| Exhibit F-51 – HAN (Total) – COPD – Pharmacotherapy – 14 Days | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 65.8% | 59.6% | 62.9% | 62.8% |
| Comparison Group | 66.3% | 66.1% | 69.7% | 67.4% |
| Difference | (0.5%) | (6.5%) | (6.8%) | (4.6%)‡ |
| ‡ HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 222 CG – 348 | HAN-T – 146 CG – 293 | HAN-T – 200 CG – 207 | HAN-T – 568 CG – 848 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Care Managed Population

Approximately 56 percent of HAN Care Managed members and 65 percent of comparison group members were compliant on this measure across the three years (Exhibit F-52). The compliance rate for HAN members rose from 2019 to 2020 before declining from 2021 to 2021. Conversely, the compliance rate for the comparison group declined from 2019 to 2020 before rising from 2020 to 2021.



Exhibit F-52 - HAN - Care Managed
COPD - Pharmacotherapy - 14 Days

The difference between the HAN Care Managed and comparison group compliance rates was statistically significant in 2021. It was not statistically significant for the three-year pooled data (Exhibit F-53).

| Exhibit F-53 – HAN (Care Managed) – COPD – Pharmacotherapy – 14 Days | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Care Managed) | 51.7% | 62.5% | 52.6% | 55.6% |
| Comparison Group | 64.4% | 58.4% | 71.4% | 64.7% |
| Difference | (12.7%) | 4.1% | (18.8%)‡ | (9.1%) |
| ‡   HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-CM – 29 CG – 288 | HAN-CM – 16 CG – 170 | HAN-CM – 17 CG – 50 | HAN-CM – 62 CG – 508 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total rural subgroup rate exceeded the urban subgroup rate from 2019 to 2021. The rates for both subgroups trended downward from 2019 to 2020 and rose again from 2020 to 2021 (ExhibitF-54).

**Exhibit F-54 - HAN Urban/Rural Subgroups
COPD - Pharmacotherapy - 14 Days**
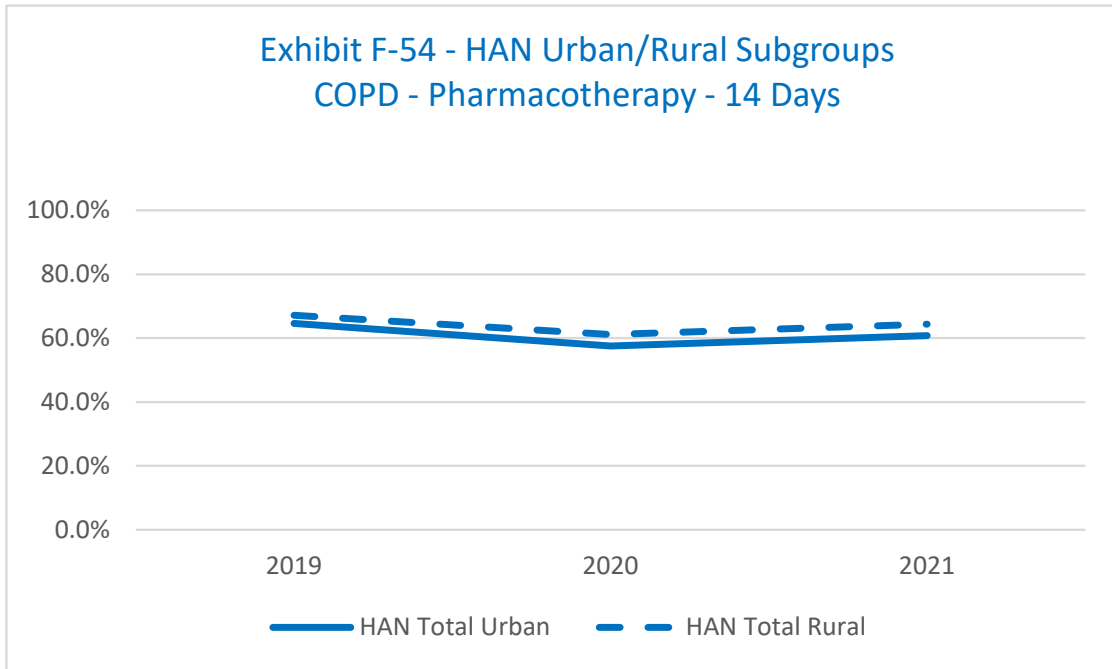


| | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 64.6% | 57.5% | 60.8% |
| | **Rural** | 67.2% | 61.1% | 64.4% |

The HAN Care Managed urban and rural subgroups were not sufficient in size to produce reliable trendlines.

# Chronic Obstructive Pulmonary Disease – Pharmacotherapy Management of Exacerbation – 30 Days

*Findings* – HAN Total Population

Approximately 71 percent of HAN total members and 71 percent of comparison group members were compliant on this measure across the three years (Exhibit F-55). The compliance rate for both populations declined from 2019 to 2021.



Exhibit F-55 - HAN - Total
COPD - Pharmacotherapy - 30 Days

The difference between the HAN total and comparison group compliance rates was not statistically significant in any of the individual years. It also was not statistically significant for the three-year pooled data (Exhibit F-56).

| Exhibit F-56 – HAN (Total) – COPD – Pharmacotherapy – 30 Days | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 73.4% | 69.9% | 69.5% | 70.9% |
| Comparison Group | 75.4% | 67.1% | 70.3% | 70.9% |
| Difference | (2.0%) | 2.8% | (0.8%) | 0.0% |
| ‡ HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 222 CG – 348 | HAN-T – 146 CG – 293 | HAN-T – 200 CG – 207 | HAN-T – 568 CG – 848 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Care Managed Population

Seventy-six percent of HAN Care Managed members and approximately 67 percent of comparison group members were compliant on this measure across the three years (Exhibit F-57). The compliance rate for HAN members declined from 2019 to 2021. The compliance rate for the comparison group declined from 2019 to 2020 before rising from 2020 to 2021.



Exhibit F-57 - HAN - Care Managed
COPD - Pharmacotherapy - 30 Days
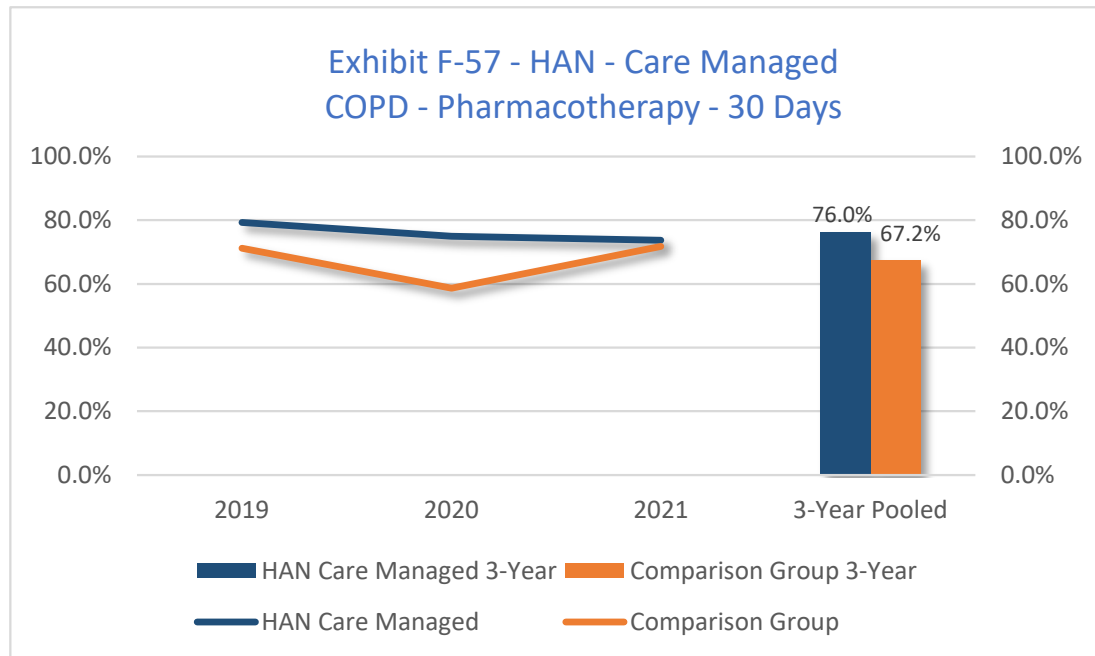
The difference between the HAN Care Managed and comparison group compliance rates was not statistically significant in any individual year. It was not statistically significant for the three-year pooled data (Exhibit F-58).

| Exhibit F-58 – HAN (Care Managed) – COPD – Pharmacotherapy – 30 Days | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Care Managed) | 79.3% | 75.0% | 73.7% | 76.0% |
| Comparison Group | 71.2% | 58.6% | 71.8% | 67.2% |
| Difference | 8.1% | 16.4% | 1.9% | 8.8% |
| ‡ HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-CM – 29 CG – 288 | HAN-CM – 16 CG – 170 | HAN-CM – 17 CG – 50 | HAN-CM – 62 CG – 508 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total urban subgroup rate exceeded the rural subgroup rate in 2019; the rural subgroup rate exceeded the urban rate in 2020 and 2021.  The urban subgroup rate trended downward from 2019 to 2021. The rural subgroup rate rose from 2019 to 2020 before declining from 2020 to 2021 (Exhibit F-59).



Exhibit F-59 - HAN Urban/Rural Subgroups
COPD - Pharmacotherapy - 30 Days
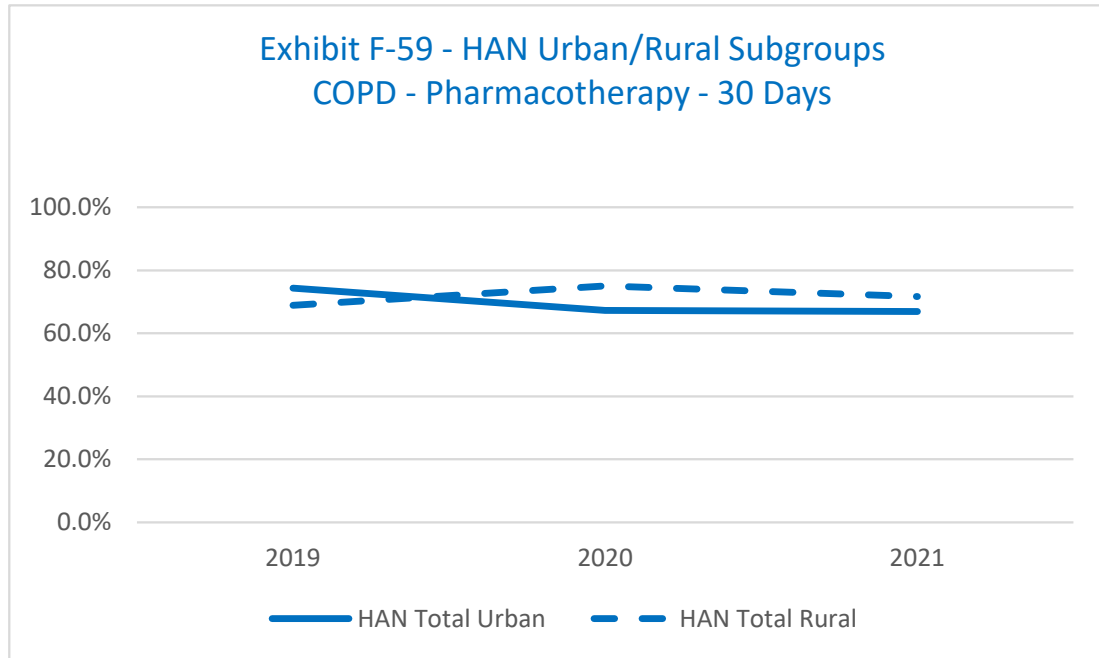
| | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 74.4% | 67.3% | 66.9% |
| | **Rural** | 68.9% | 75.0% | 71.7% |

The HAN Care Managed urban and rural subgroups were not sufficient in size to produce reliable trendlines.

## Diabetes – LDL-C Test

### *Findings* – HAN Total Population

Approximately 55 percent of HAN total members and 53 percent of comparison group members were compliant on this measure across the three years (Exhibit F-60). The compliance rate for the HAN total population declined from 2019 to 2021. The compliance rate for the comparison group declined from 2019 to 2020 before rising again from 2020 to 2021.



Exhibit F-60 - HAN - Total
Diabetes - LDL-C Test
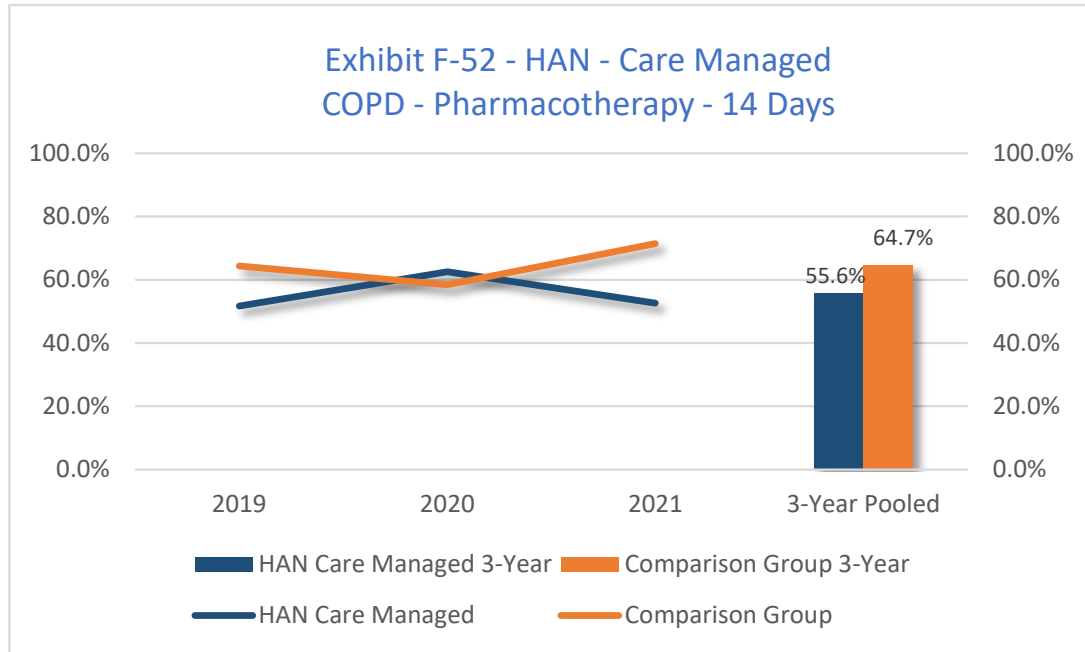
The difference between the HAN total and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-61).

| Exhibit F-61 – HAN (Total) – Diabetes – LDL-C Test | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 60.0% | 54.5% | 49.1% | 54.5% |
| Comparison Group | 55.1% | 50.5% | 52.0% | 52.5% |
| Difference | 4.9%‡ | 4.0%‡ | (2.9%)‡ | 2.0%‡ |
| ‡ HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 2,034 CG – 3,785 | HAN-T – 2,240 CG – 4,501 | HAN-T – 4,822 CG – 4,830 | HAN-T – 9,096 CG – 13,116 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Care Managed Population

Approximately 61 percent of HAN Care Managed members and 54 percent of comparison group members were compliant on this measure across the three years (Exhibit F-62). The compliance rate for the HAN Care Managed population declined from 2019 to 2021. The compliance rate for the comparison group declined from 2019 to 2020 before rising again from 2020 to 2021.



Exhibit F-62 - HAN - Care Managed Diabetes - LDL-C Test
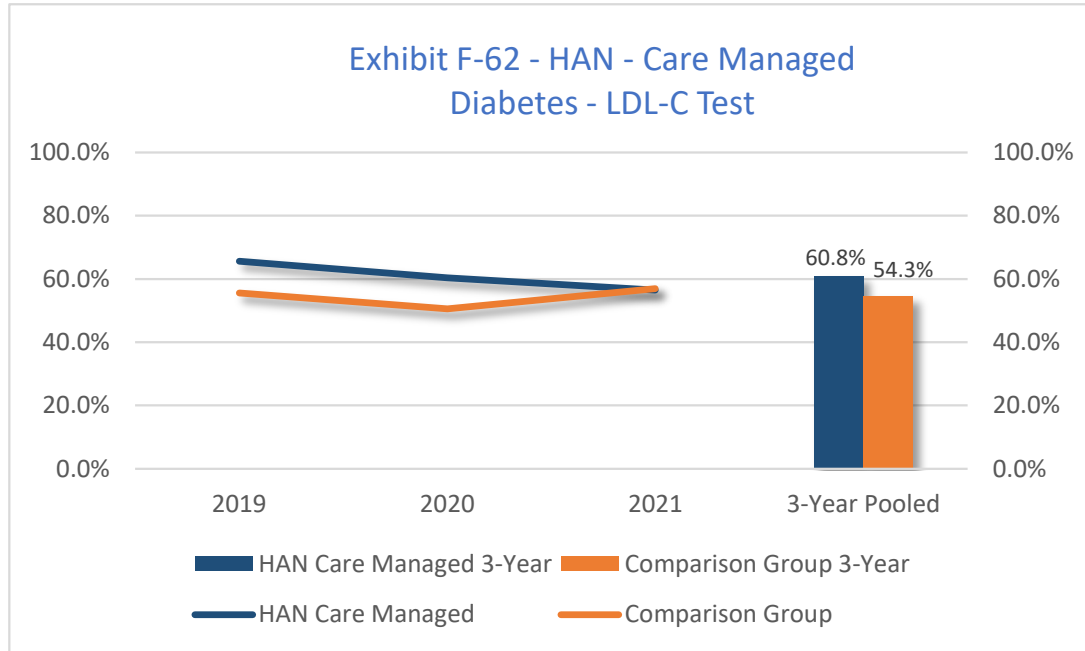
The difference between the HAN Care Managed and comparison group compliance rates was statistically significant in 2019 and 2020. It also was statistically significant for the three-year pooled data (Exhibit F-63).

| Exhibit F-63 – HAN (Care Managed) – Diabetes – LDL-C Test | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Care Managed) | 65.6% | 60.4% | 56.5% | 60.8% |
| Comparison Group | 55.6% | 50.5% | 56.9% | 54.3% |
| Difference | 10.0%‡ | 9.9%‡ | (0.4%) | 6.5%‡ |
| ‡ HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-CM – 131 CG – 2,635 | HAN-CM – 105 CG – 2,529 | HAN-CM – 170 CG – 3,372 | HAN-CM – 406 CG – 8,536 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total urban and rural subgroups had nearly equal rates in 2019 and 2020; the HAN rural subgroup rate exceeded the urban rate in 2021.  The rates for both subgroups declined from 2019 to 2021 (Exhibit F-64).

**Exhibit F-64 - HAN Urban/Rural Subgroups**
**Diabetes - LDL-C Test**
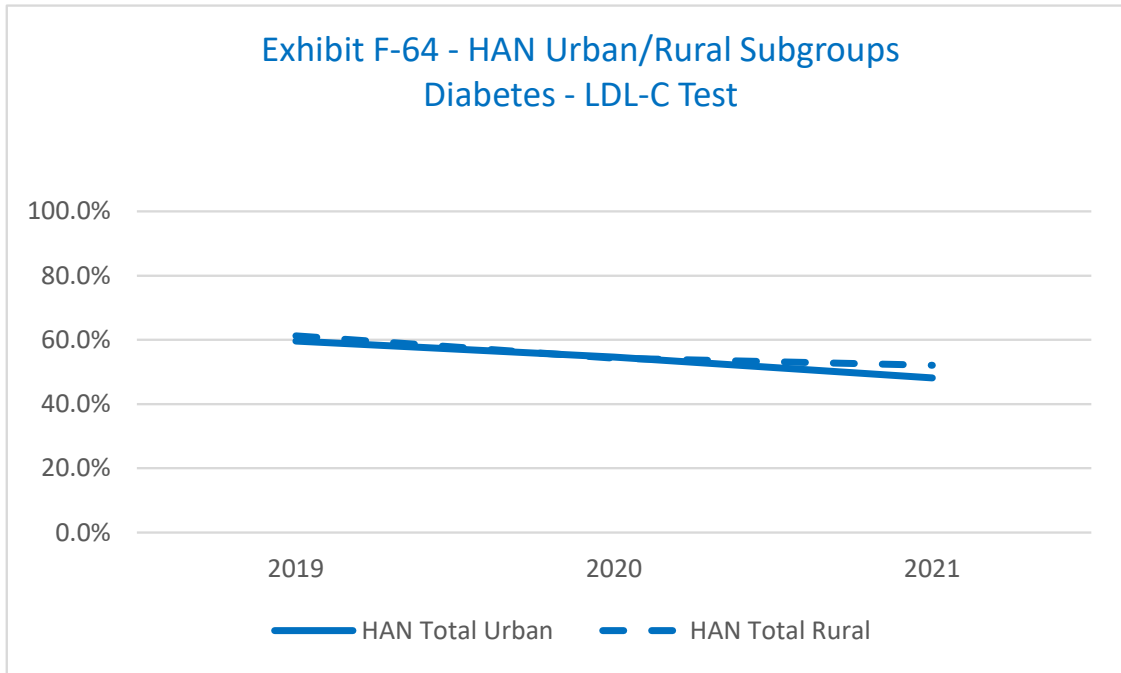


| | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 59.6% | 54.7% | 48.1% |
| | **Rural** | 61.3% | 54.3% | 52.1% |

The HAN Care Managed urban and rural subgroups were not sufficient in size to produce reliable trendlines.

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HAN total population in the prior waiver period (2016 to 2018). The compliance rate rose from approximately 53 percent in 2016 to 60 percent in 2019, before declining to 49 percent in 2021 (Exhibit F-65).

**Exhibit F-65 - HAN - Total - Prior and Current Periods Diabetes - LDL-C Test**
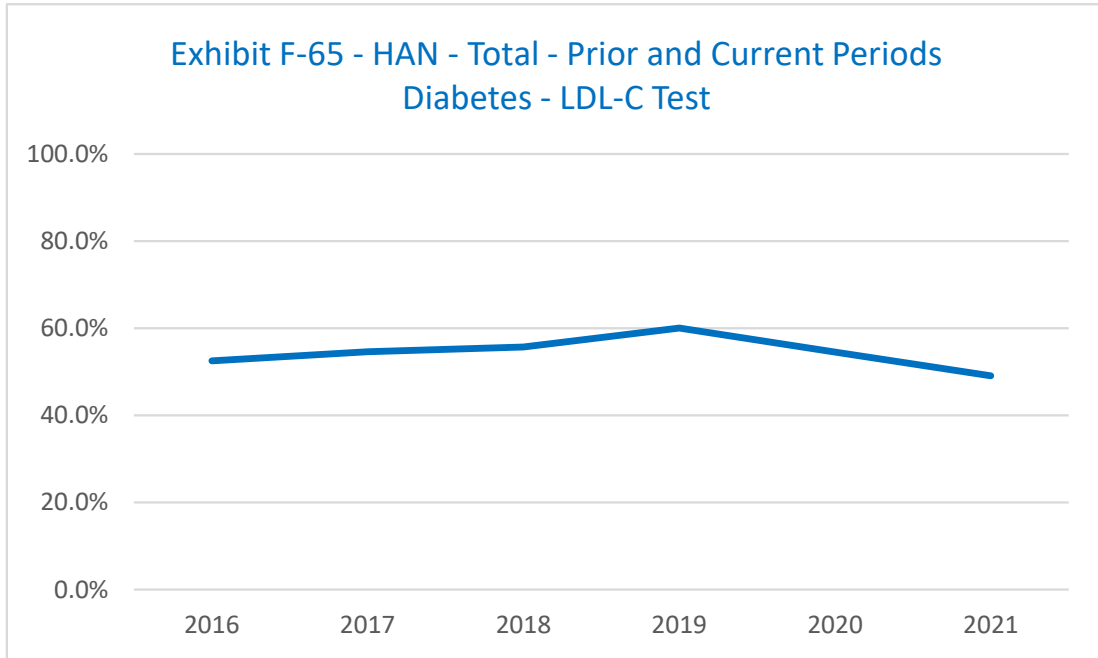


| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| HAN (Total) | 52.5% | 54.6% | 55.7% | 60.0% | 54.5% | 49.1% |

## Diabetes – Retinal Eye Exam

### *Findings* – HAN Total Population

Approximately 29 percent of HAN total members and 22 percent of comparison group members were compliant on this measure across the three years (Exhibit F-66). The compliance rate for both populations declined from 2019 to 2021.
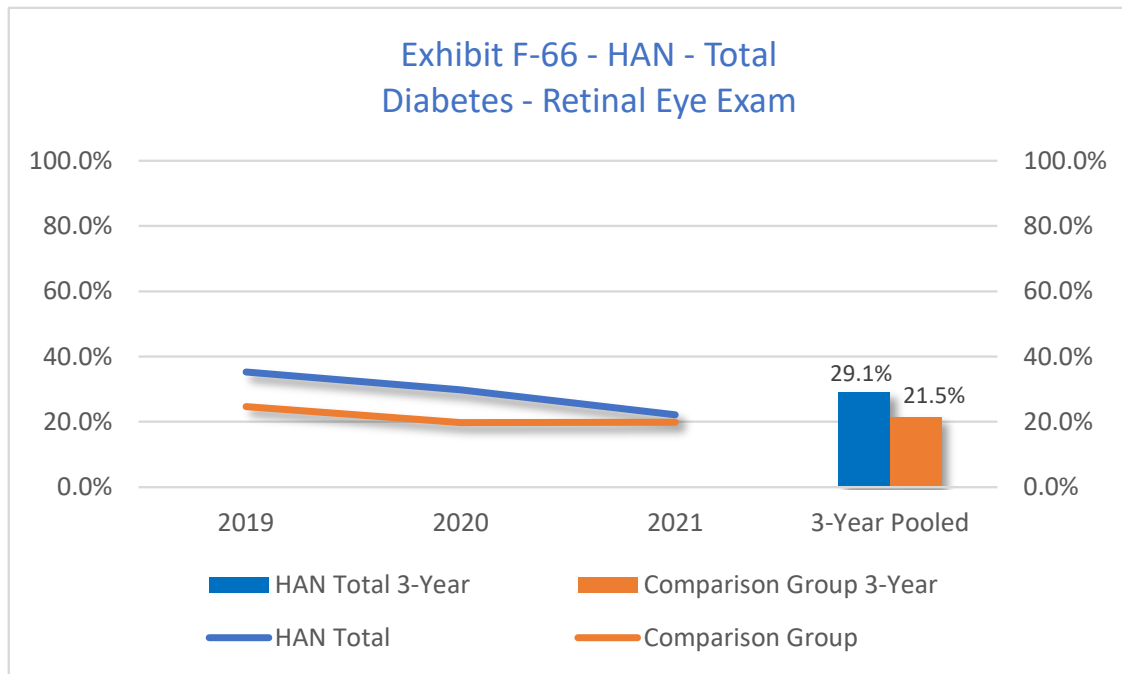


Exhibit F-66 - HAN - Total
Diabetes - Retinal Eye Exam

The difference between the HAN total and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-67).

| Exhibit F-67 – HAN (Total) – Diabetes – Retinal Eye Exam | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 35.3% | 29.8% | 22.2% | 29.1% |
| Comparison Group | 24.7% | 19.8% | 19.9% | 21.5% |
| Difference | 10.6%‡ | 10.0%‡ | 2.3%‡ | 7.6%‡ |
| ‡ HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 2,034 CG – 3,785 | HAN-T – 2,240 CG – 4,501 | HAN-T – 4,822 CG – 4,830 | HAN-T – 9,096 CG – 13,116 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Care Managed Population

Approximately 37 percent of HAN Care Managed members and 22 percent of comparison group members were compliant on this measure across the three years (Exhibit F-68). The compliance rate for both populations declined from 2019 to 2020 before rising again from 2020 to 2021.



Exhibit F-68 - HAN - Care Managed
Diabetes - Retinal Eye Exam

The difference between the HAN Care Managed and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-69).

| Exhibit F-69 – HAN (Care Managed) – Diabetes – Retinal Eye Exam | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Care Managed) | 39.7% | 34.4% | 37.1% | 37.1% |
| Comparison Group | 24.5% | 19.8% | 20.7% | 21.7% |
| Difference | 15.2%‡ | 14.6%‡ | 16.4%‡ | 15.4%‡ |
| ‡   HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-CM – 131 CG – 2,635 | HAN-CM – 105 CG – 2,529 | HAN-CM – 170 CG – 3,372 | HAN-CM – 406 CG – 8,536 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total urban subgroup rate exceeded the rural subgroup rate across the three years.  The rates for both subgroups declined from 2019 to 2021 (Exhibit F-70).

**Exhibit F-70 - HAN Urban/Rural Subgroups**
**Diabetes - Retinal Eye Exam**



|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 36.2% | 31.6% | 22.4% |
|  | **Rural** | 32.1% | 28.0% | 21.8% |

The HAN Care Managed urban and rural subgroups were not sufficient in size to produce reliable trendlines.

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HAN total population in the prior waiver period (2016 to 2018). The compliance rate rose from approximately 30 percent in 2016 to 35 percent in 2019, before declining to 22 percent in 2021 (Exhibit F-71).

### Exhibit F-71 - HAN - Total - Prior and Current Periods
### Diabetes - Retinal Eye Exam
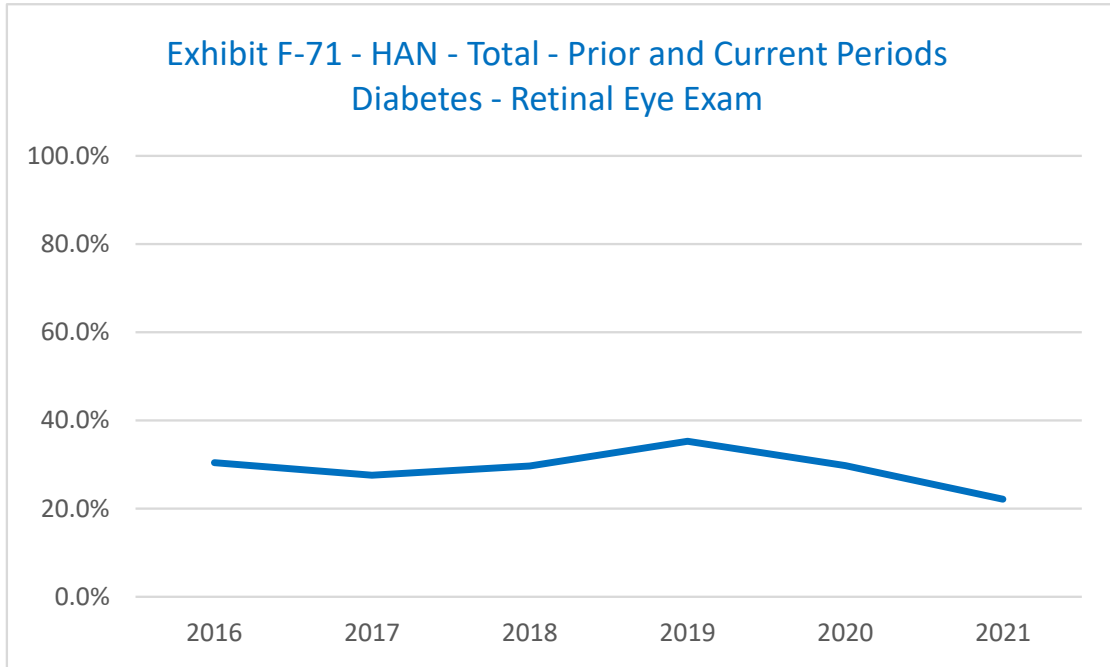


| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| HAN (Total) | 30.4% | 27.6% | 29.7% | 35.3% | 29.8% | 22.2% |

## Diabetes – HbA1c Testing

### *Findings* – HAN Total Population

Approximately 71 percent of HAN total members and 68 percent of comparison group members were compliant on this measure across the three years (Exhibit F-72). The compliance rate for both populations declined from 2019 to 2021.



Exhibit F-72 - HAN - Total
Diabetes - HbA1c Testing

The difference between the HAN total and comparison group compliance rates was statistically significant in 2019 and 2020. It also was statistically significant for the three-year pooled data (Exhibit F-73).

| Exhibit F-73 – HAN (Total) – Diabetes – HbA1c Testing | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 76.7% | 72.2% | 65.2% | 71.4% |
| Comparison Group | 71.9% | 65.8% | 66.0% | 67.9% |
| Difference | 4.8%‡ | 6.4%‡ | (0.8%) | 3.5%‡ |
| ‡ HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 2,034 CG – 3,785 | HAN-T – 2,240 CG – 4,501 | HAN-T – 4,822 CG – 4,830 | HAN-T – 9,096 CG – 13,116 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

## Findings – HAN Care Managed Population

Approximately 76 percent of HAN Care Managed members and 68 percent of comparison group members were compliant on this measure across the three years (Exhibit F-74). The compliance rate for the HAN total population declined from 2019 to 2021. The compliance rate for the comparison group population declined from 2019 to 2020 before rising again from 2020 to 2021.



Exhibit F-74 - HAN - Care Managed Diabetes - HbA1c Testing

The difference between the HAN Care Managed and comparison group compliance rates was statistically significant in 2019 and 2020. It also was statistically significant for the three-year pooled data (Exhibit F-75).

| Exhibit F-75 – HAN (Care Managed) – Diabetes – HbA1c Testing | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Care Managed) | 78.6% | 76.6% | 71.8% | 75.7% |
| Comparison Group | 71.0% | 65.8% | 68.4% | 68.4% |
| Difference | 7.6%‡ | 10.8%‡ | 3.4% | 7.3%‡ |
| ‡ HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-CM – 131 CG – 2,635 | HAN-CM – 105 CG – 2,529 | HAN-CM – 170 CG – 3,372 | HAN-CM – 406 CG – 8,536 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total urban subgroup rate exceeded the rural subgroup rate across the three years.  The rates for both subgroups declined from 2019 to 2021 (Exhibit F-76).



Exhibit F-76 - HAN Urban/Rural Subgroups
Diabetes - HbA1c Testing

|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 78.2% | 74.2% | 67.3% |
|  | **Rural** | 71.6% | 70.3% | 59.2% |

The HAN Care Managed urban and rural subgroups were not sufficient in size to produce reliable trendlines.

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HAN total population in the prior waiver period (2016 to 2018). The compliance rate declined from approximately 77 percent in 2016 to 65 percent in 2021 (Exhibit F-77).

**Exhibit F-77 - HAN - Total - Prior and Current Periods Diabetes - HbA1c Testing**
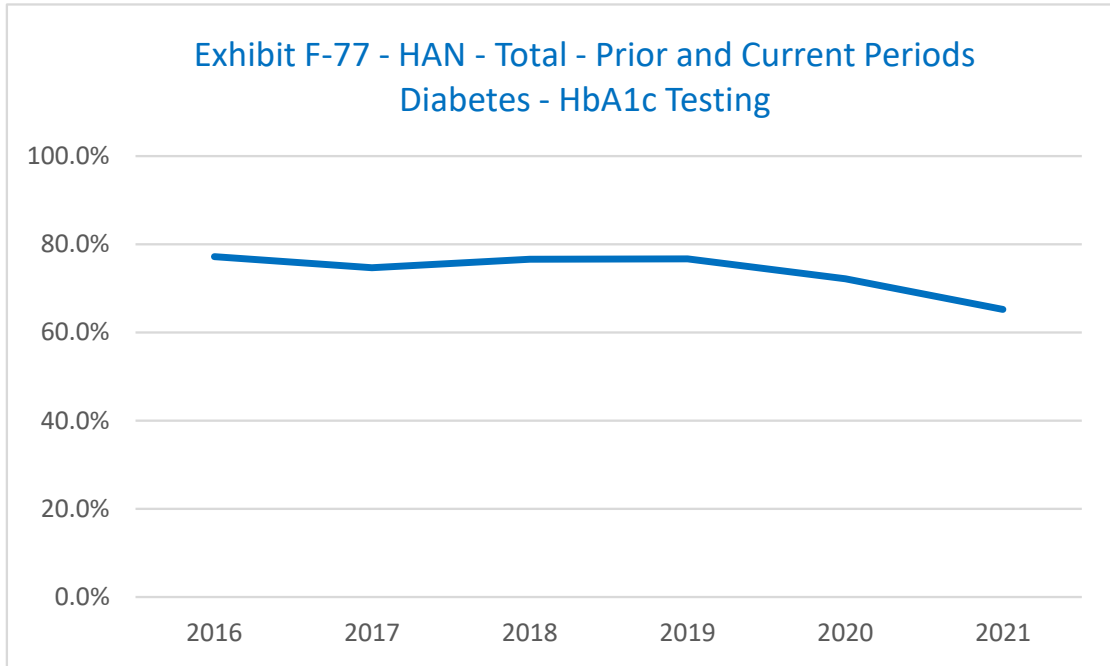


|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| HAN (Total) | 77.2% | 74.7% | 76.6% | 76.7% | 72.2% | 65.2% |

## Diabetes – Medical Attention for Nephropathy

*Findings* – HAN Total Population

Approximately 81 percent of HAN total members and 79 percent of comparison group members were compliant on this measure across the three years (Exhibit F-78). The compliance rate for both populations declined from 2019 to 2021.
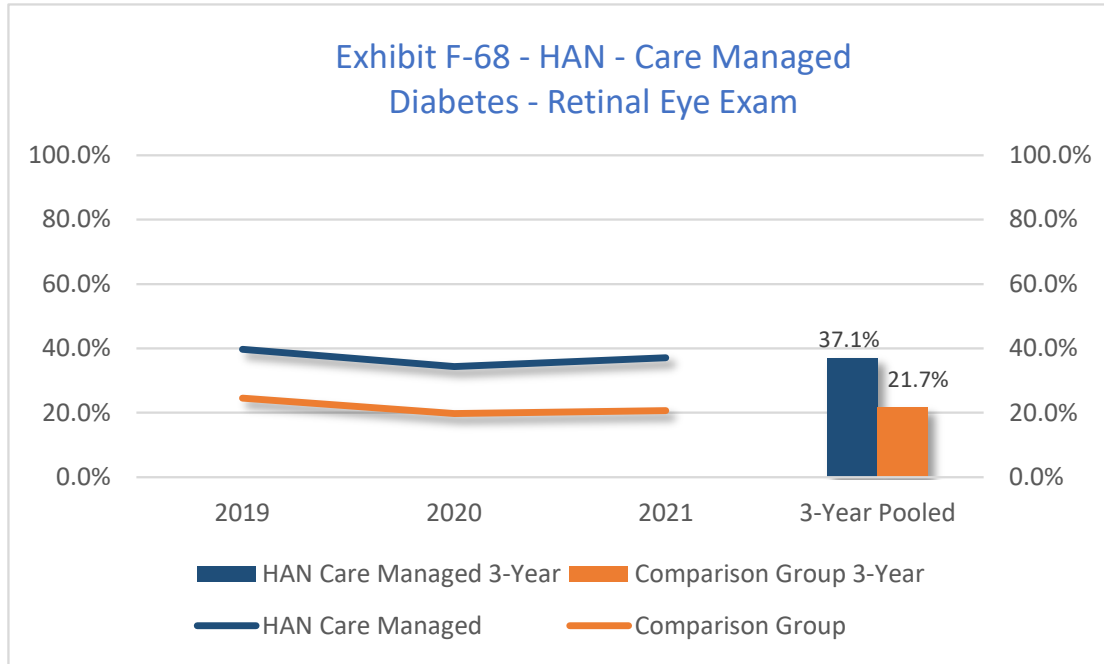


Exhibit F-78 - HAN - Total
Diabetes - Medical Attention for Nephropathy

The difference between the HAN total and comparison group compliance rates was statistically significant in 2019 and 2020. It also was statistically significant for the three-year pooled data (Exhibit F-79).

| Exhibit F-79 – HAN (Total) – Diabetes – Medical Attention for Nephropathy | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 85.2% | 80.8% | 76.7% | 80.9% |
| Comparison Group | 83.1% | 78.6% | 76.2% | 79.3% |
| Difference | 2.1%‡ | 2.2%‡ | 0.5% | 1.6%‡ |
| ‡ HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 2,034 CG – 3,785 | HAN-T – 2,240 CG – 4,501 | HAN-T – 4,822 CG – 4,830 | HAN-T – 9,096 CG – 13,116 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Care Managed Population

Ninety-one percent of HAN Care Managed members and approximately 81 percent of comparison group members were compliant on this measure across the three years (Exhibit F-80). The compliance rate for both populations declined from 2019 to 2020 before rising again from 2020 to 2021.
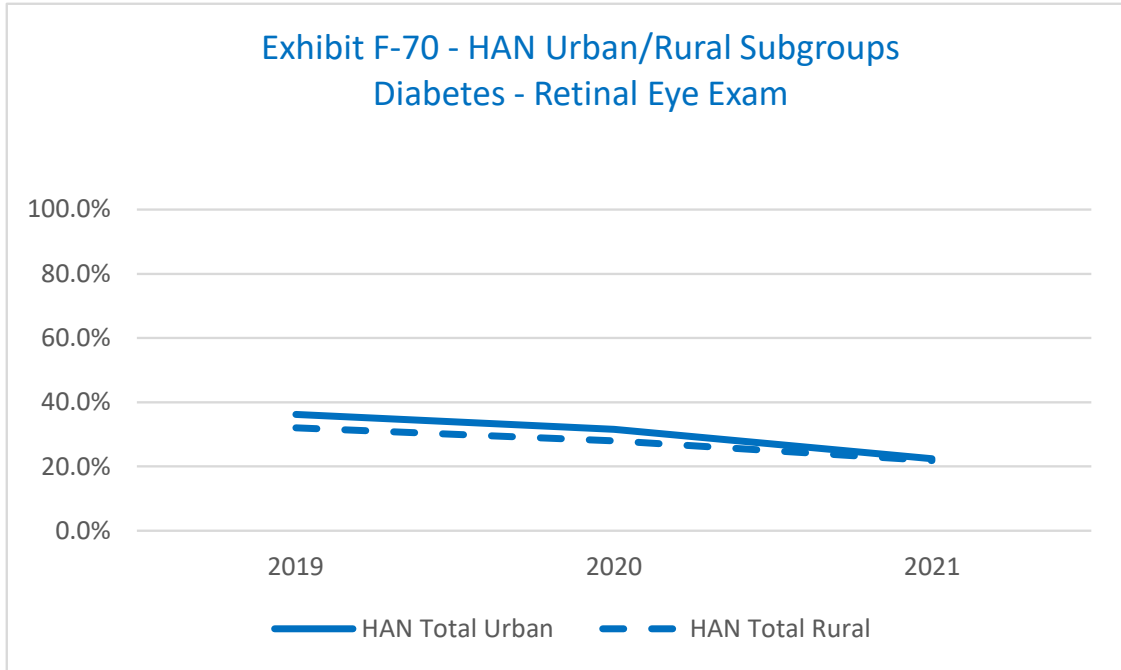


Exhibit F-80 - HAN - Care Managed
Diabetes - Medical Attention for Nephropathy

The difference between the HAN Care Managed and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-81).

| Exhibit F-81 – HAN (Care Managed) – Diabetes – Medical Attention for Nephropathy | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Care Managed) | 91.6% | 88.6% | 92.9% | 91.0% |
| Comparison Group | 84.2% | 78.6% | 80.7% | 81.2% |
| Difference | 7.4%‡ | 10.0%‡ | 12.2%‡ | 9.8%‡ |
| ‡  HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-CM – 131 CG – 2,635 | HAN-CM – 105 CG – 2,529 | HAN-CM – 170 CG – 3,372 | HAN-CM – 406 CG – 8,536 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total urban subgroup rate exceeded the rural subgroup rate across the three years. The rates for both subgroups declined from 2019 to 2021 (Exhibit F-82).

**Exhibit F-82 - HAN Urban/Rural Subgroups**
**Diabetes - Medical Attention for Nephropathy**



|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 85.4% | 83.4% | 77.6% |
|  | **Rural** | 84.1% | 78.3% | 73.9% |

The HAN Care Managed urban and rural subgroups were not sufficient in size to produce reliable trendlines.

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HAN total population in the prior waiver period (2016 to 2018). The compliance rate rose from approximately 79 percent in 2016 to 85 percent in 2019, before declining to 77 percent in 2021 (Exhibit F-83).
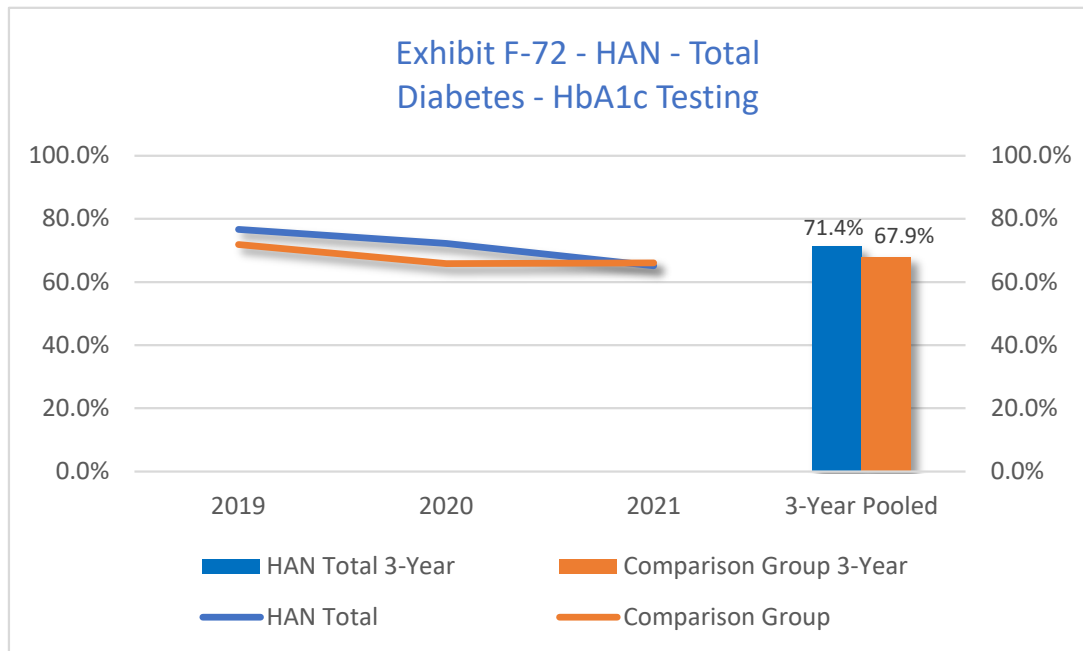
**Exhibit F-83 - HAN - Total - Prior and Current Periods**
**Diabetes - Medical Attention for Nephropathy**



|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| HAN (Total) | 78.8% | 77.8% | 84.8% | 85.2% | 80.8% | 76.7% |

## Hypertension – LDL-C Test

*Findings* – HAN Total Population

Approximately 53 percent of HAN total members and 53 percent of comparison group members were compliant on this measure across the three years (Exhibit F-84). The compliance rate for both populations declined from 2019 to 2020 before rising again from 2020 to 2021.
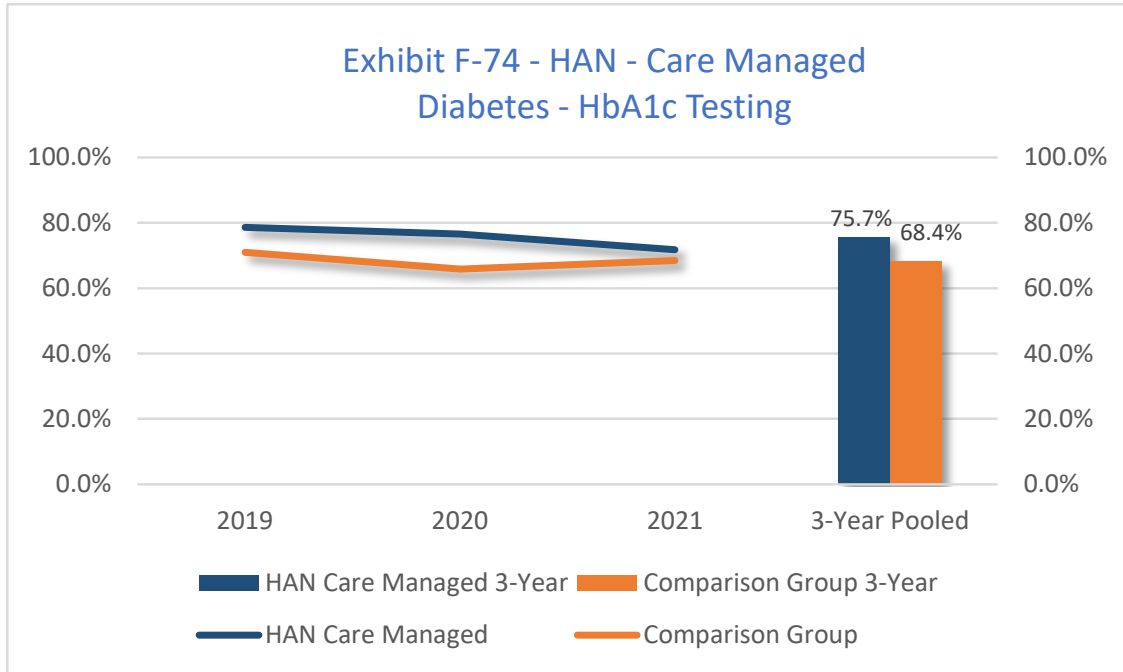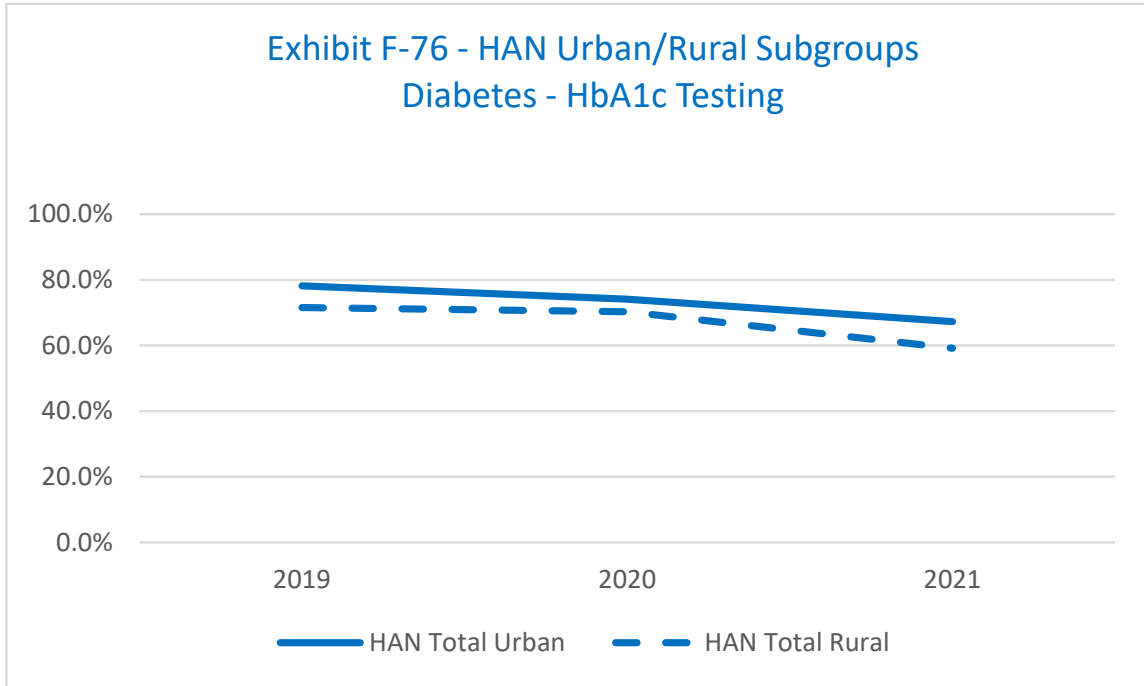


Exhibit F-84 - HAN - Total
Hypertension - LDL-C Test
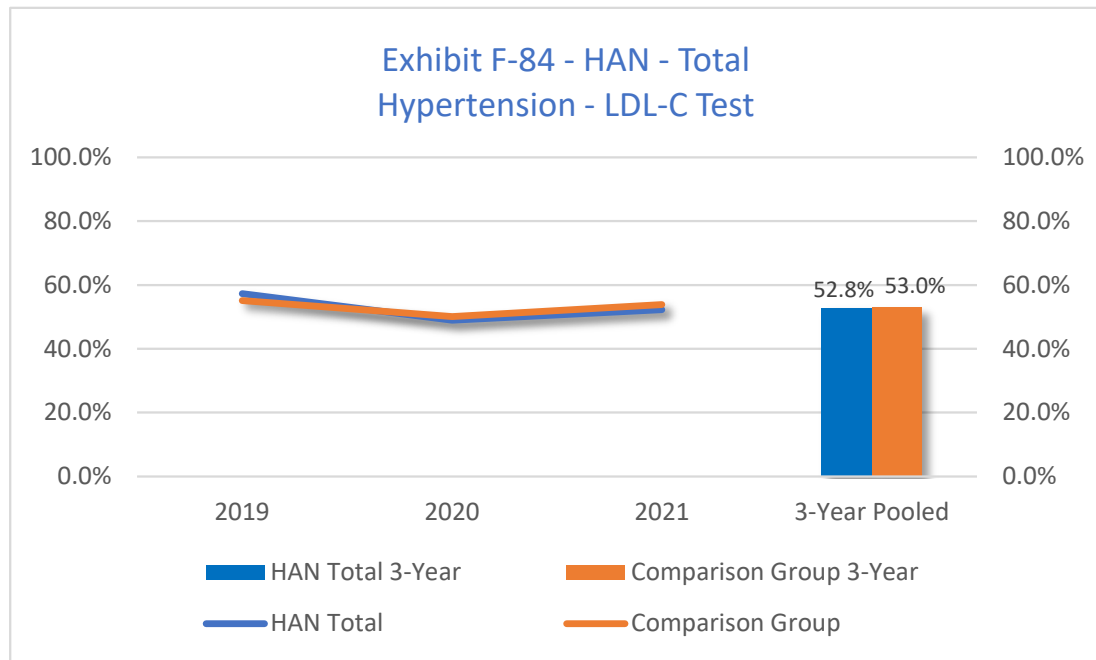
The difference between the HAN total and comparison group compliance rates was statistically significant in 2019 and 2021. It was not statistically significant for the three-year pooled data (Exhibit F-85).

| Exhibit F-85 – HAN (Total) – Hypertension – LDL-C Test | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 57.3% | 48.9% | 52.3% | 52.8% |
| Comparison Group | 55.1% | 50.1% | 53.8% | 53.0% |
| Difference | 2.2%‡ | (1.2%) | (1.5%)‡ | (0.2%) |
| ‡ HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 3,321 CG – 5,960 | HAN-T – 3,794 CG – 7,885 | HAN-T – 4,668 CG – 6,582 | HAN-T – 11,783 CG – 20,427 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Care Managed Population

Approximately 56 percent of HAN Care Managed members and 54 percent of comparison group members were compliant on this measure across the three years (Exhibit F-86). The compliance rate for both populations declined from 2019 to 2020 before rising again from 2020 to 2021.



Exhibit F-86 - HAN - Care Managed Hypertension - LDL-C Test
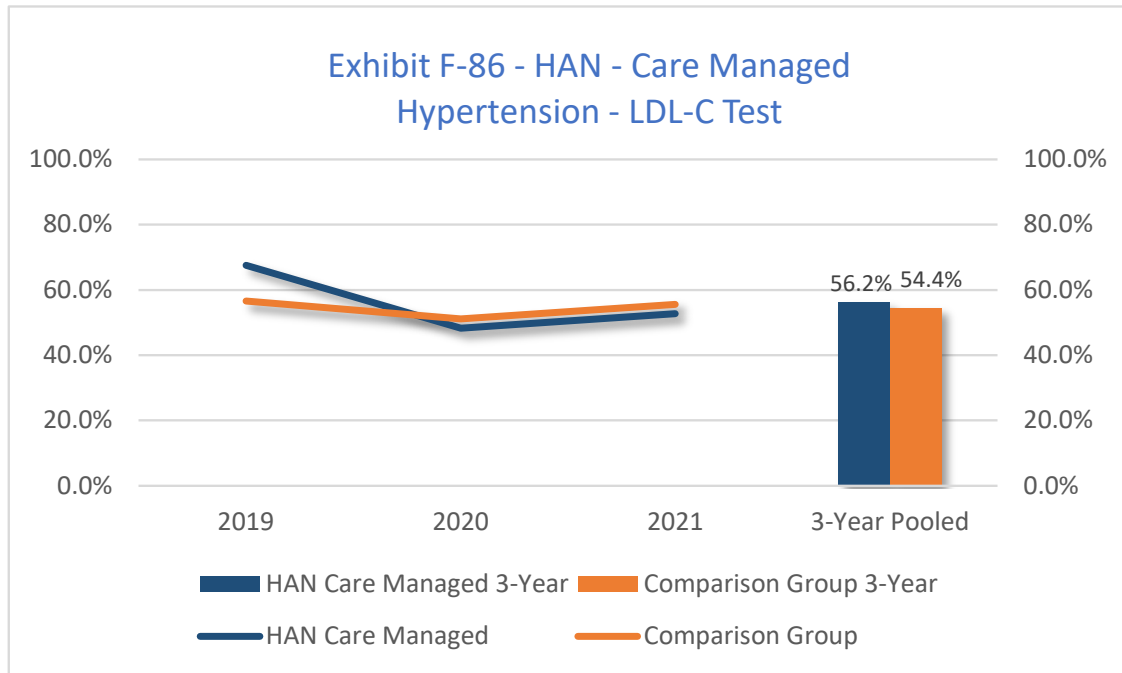
The difference between the HAN Care Managed and comparison group compliance rates was statistically significant in 2019. It was not statistically significant for the three-year pooled data (Exhibit F-87).

| Exhibit F-87 – HAN (Care Managed) – Hypertension – LDL-C Test | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Care Managed) | 67.5% | 48.3% | 52.7% | 56.2% |
| Comparison Group | 56.6% | 51.1% | 55.6% | 54.4% |
| Difference | 10.9%‡ | (2.8%) | (2.9%) | 1.8% |
| ‡   HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-CM – 209 CG – 4,637 | HAN-CM – 207 CG – 4,728 | HAN-CM – 279 CG – 5,360 | HAN-CM – 695 CG – 14,724 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total rural subgroup rate exceeded the urban subgroup rate across the three years. The rates for both subgroups declined from 2019 to 2020 and rose from 2020 to 2021 (Exhibit F-88).



Exhibit F-88 - HAN Urban/Rural Subgroups
Hypertension - LDL-C Test

| | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 55.5% | 47.8% | 51.0% |
| | **Rural** | 63.3% | 52.6% | 56.1% |

The HAN Care Managed urban and rural subgroups were not sufficient in size to produce reliable trendlines.

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HAN total population in the prior waiver period (2016 to 2018).  The compliance rate rose from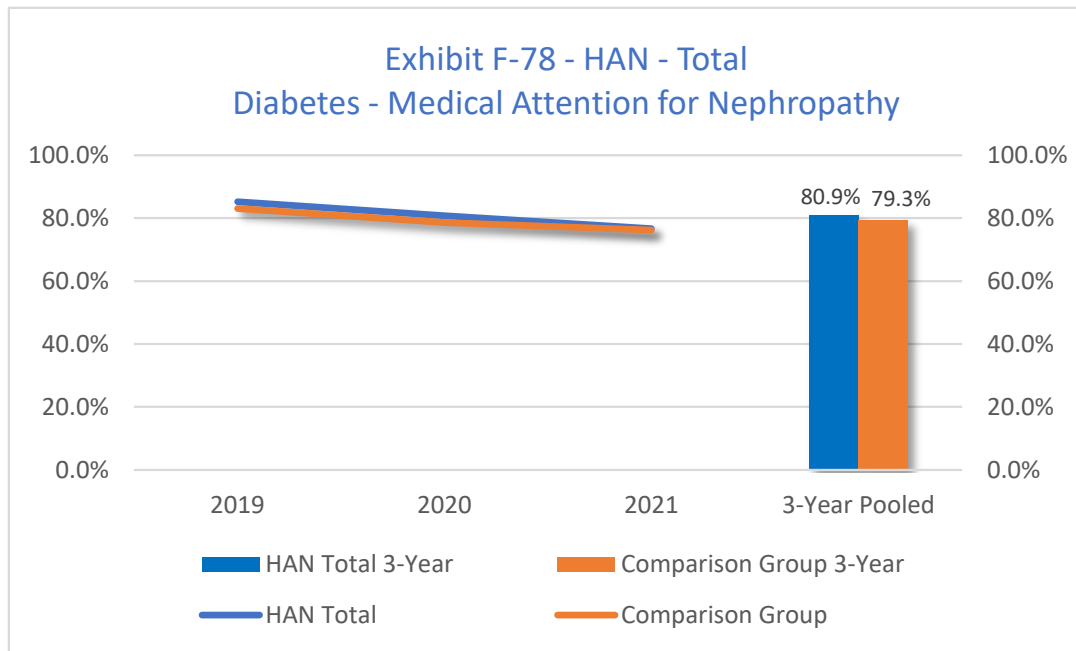 approximately 53 percent in 2016 to 57 percent in 2019, before declining to 49 percent in 2021 and rising again to 52 percent in 2021 (Exhibit F-89).

**Exhibit F-89 - HAN - Total - Prior and Current Periods Hypertension - LDL-C Test**
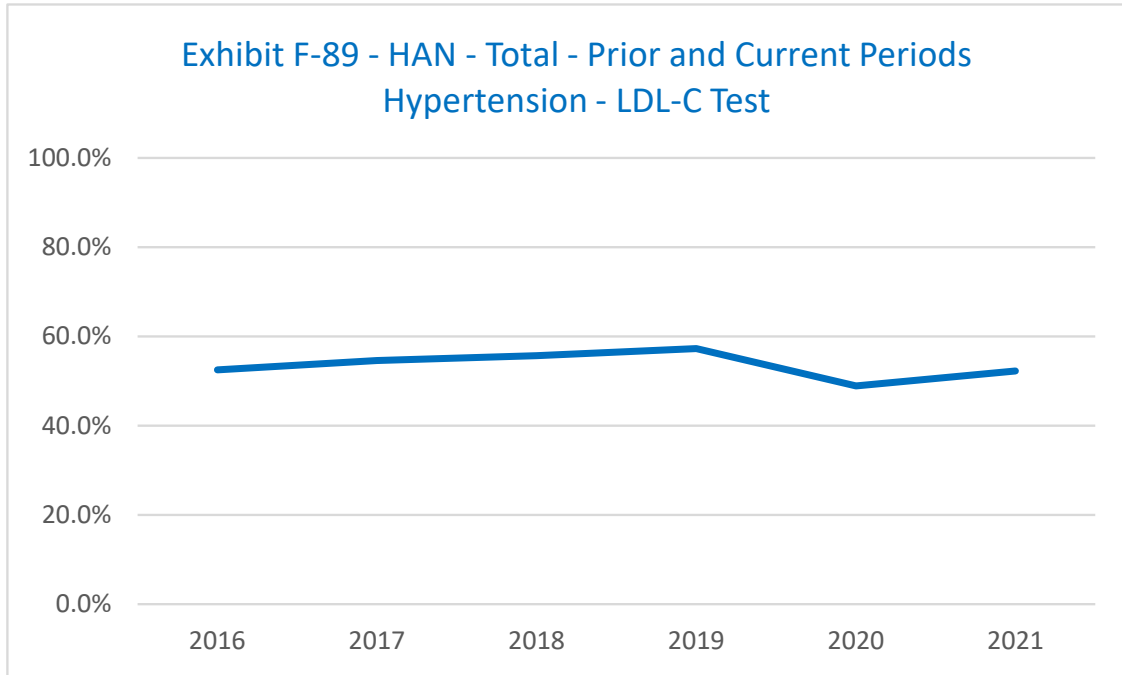


|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| HAN (Total) | 52.5% | 54.6% | 55.7% | 57.3% | 48.9% | 52.3% |

## Hypertension – ACE/ARB Therapy

*Findings* – HAN Total Population

Approximately 59 percent of HAN total members and 61 percent of comparison group members were compliant on this measure across the three years (Exhibit F-90). The compliance rate for the HAN total population declined slightly from 2019 to 2021. The compliance rate for the comparison group declined slightly from 2019 to 2020 before rising slightly again from 2020 to 2021.

Exhibit F-90 - HAN - Total
Hypertension - ACE/ARB Therapy



The difference between the HAN total and comparison group compliance rates was statistically significant in 2021. It also was statistically significant for the three-year pooled data (Exhibit F-91).

| Exhibit F-91 – HAN (Total) – Hypertension – ACE/ARB Therapy | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 60.7% | 59.5% | 57.7% | 59.3% |
| Comparison Group | 61.3% | 60.6% | 61.1% | 61.0% |
| Difference | (0.6%) | (1.1%) | (3.4%)‡ | (1.7%)‡ |
| ‡   HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 3,321 CG – 5,960 | HAN-T – 3,794 CG – 7,885 | HAN-T – 4,668 CG – 6,582 | HAN-T – 11,783 CG – 20,427 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Care Managed Population

Approximately 61 percent of HAN Care Managed members and 62 percent of comparison group members were compliant on this measure across the three years (Exhibit F-92). The compliance rate for both populations declined from 2019 to 2020 before rising again from 2020 to 2021.
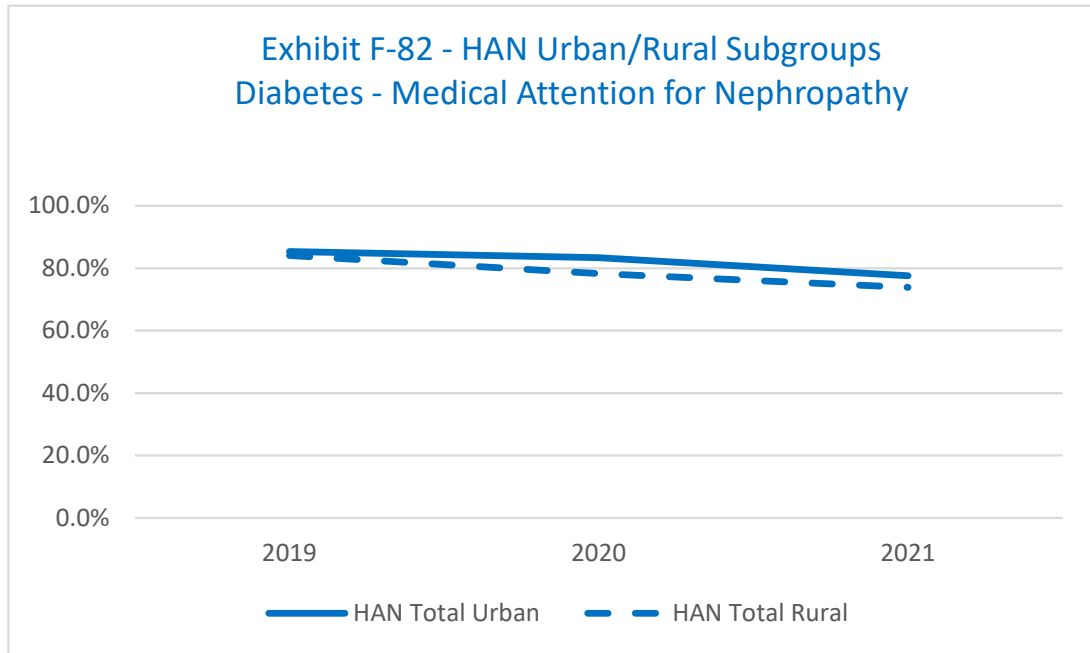


Exhibit F-92 - HAN - Care Managed Hypertension - ACE/ARB Therapy

The difference between the HAN Care Managed and comparison group compliance rates was not statistically significant in any of the individual years. It also was not statistically significant for the three-year pooled data (Exhibit F-93).

| Exhibit F-93 – HAN (Care Managed) – Hypertension – ACE/ARB Therapy | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Care Managed) | 64.6% | 57.5% | 59.9% | 60.7% |
| Comparison Group | 62.2% | 60.6% | 62.1% | 61.6% |
| Difference | 2.4% | (3.1%) | (2.2%) | (0.9%) |
| ‡ HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-CM – 209 CG – 4,637 | HAN-CM – 207 CG – 4,728 | HAN-CM – 279 CG – 5,360 | HAN-CM – 695 CG – 14,724 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total rural subgroup rate exceeded the urban subgroup rate across the three years. The rates for both subgroups declined slightly from 2019 to 2021 (Exhibit F-94).
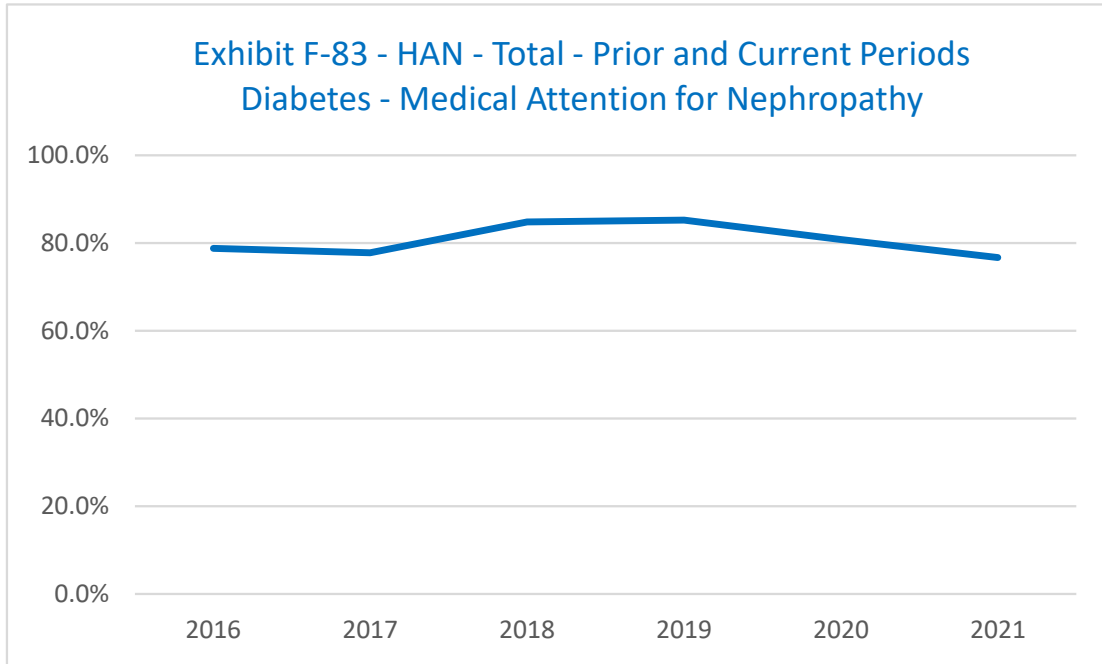
## Exhibit F-94 - HAN Urban/Rural Subgroups Hypertension - ACE/ARB Therapy
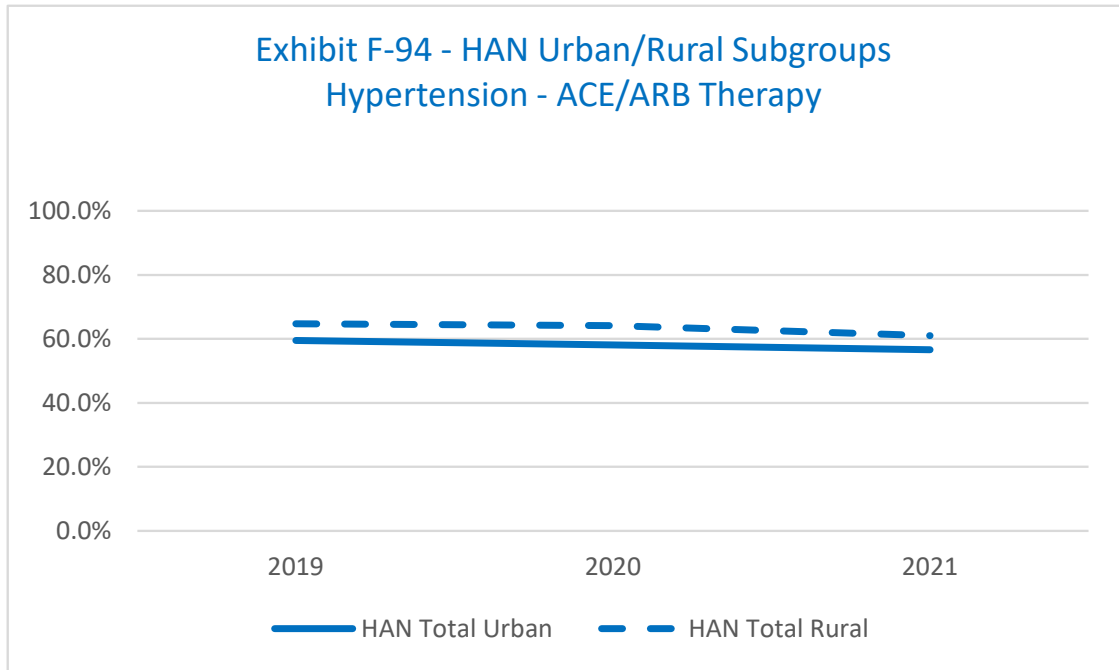


| | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 59.5% | 58.1% | 56.6% |
| | **Rural** | 64.7% | 64.2% | 61.0% |

The HAN Care Managed urban and rural subgroups were not sufficient in size to produce reliable trendlines.

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HAN total population in the prior waiver period (2016 to 2018). The compliance rate rose from approximately 54 percent in 2016 to 61 percent in 2019, before declining to 58 percent in 2021 (Exhibit F-95).

**Exhibit F-95 - HAN - Total - Prior and Current Periods Hypertension - ACE/ARB Therapy**
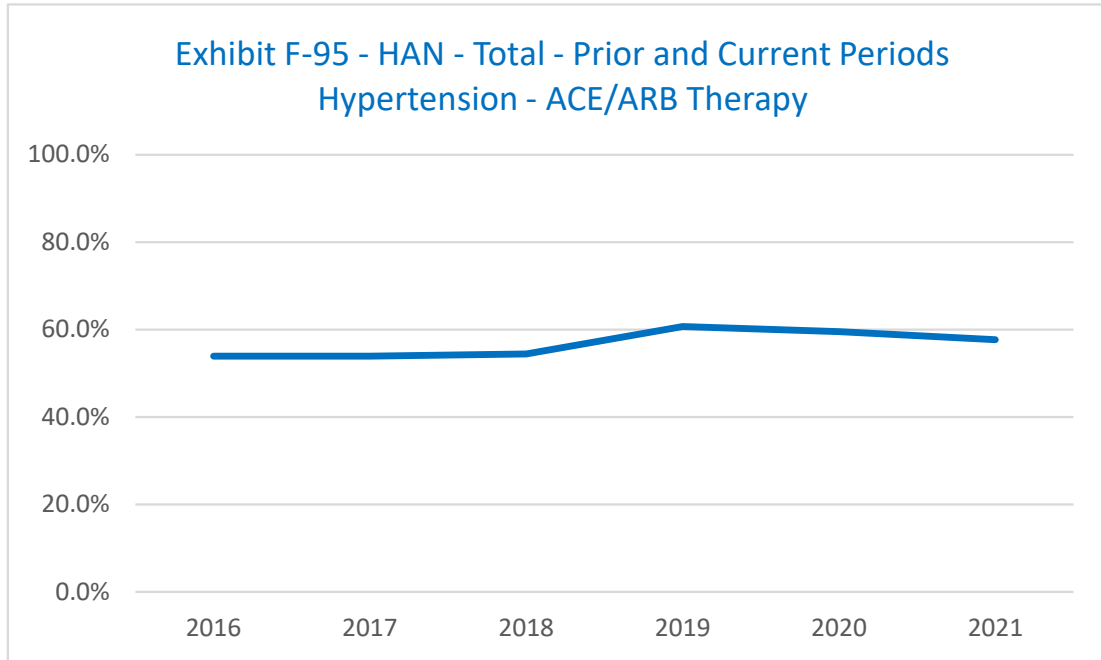


| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| HAN (Total) | 53.9% | 53.9% | 54.4% | 60.7% | 59.5% | 57.7% |

# Mental Health – Follow-up after Hospitalization for Mental Illness – 7 Days – Ages 6 to 20

*Findings* – HAN Total Population

Approximately 59 percent of HAN total members and 58 percent of comparison group members were compliant on this measure across the three years (Exhibit F-96). The compliance rate for the HAN total population rose from 2019 to 2020, before declining from 2020 to 2021. The compliance rate for the comparison group declined from 2019 to 2021.



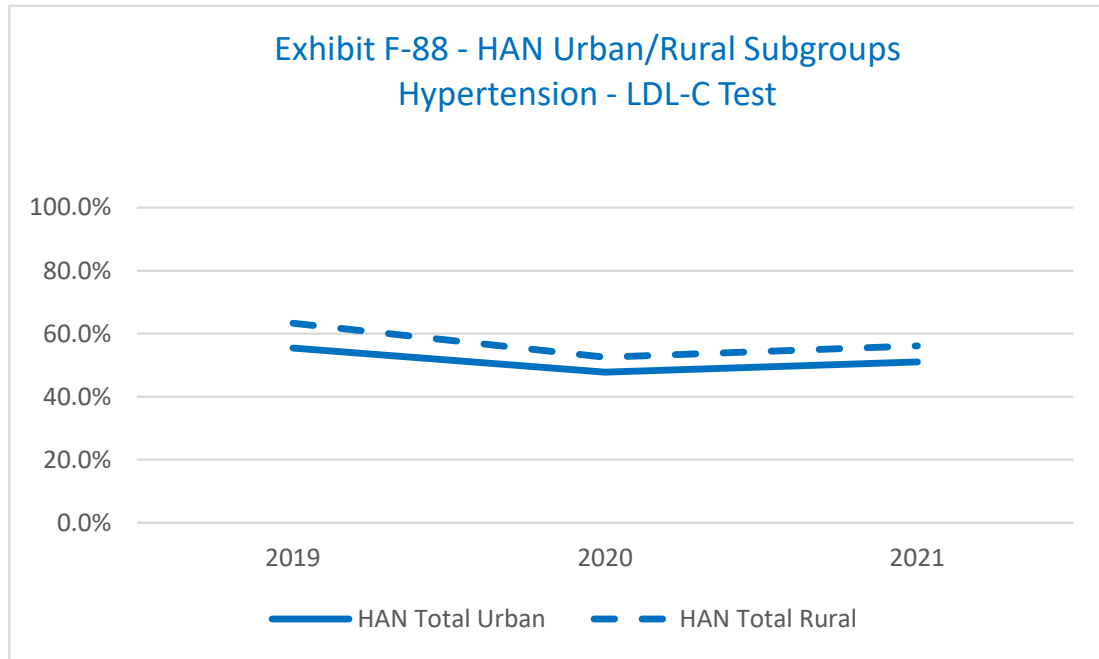Exhibit F-96 - HAN - Total
Mental Health - 7-Day Follow-up - Ages 6 to 20

The difference between the HAN total and comparison group compliance rates was statistically significant in 2020. It was not statistically significant for the three-year pooled data (Exhibit F-97).

| Exhibit F-97 – HAN (Total) – Mental Health – 7-Day Follow-up – Ages 6 to 20 | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 58.9% | 64.5% | 52.3% | 58.6% |
| Comparison Group | 62.0% | 56.9% | 55.5% | 58.1% |
| Difference | (3.1%) | 7.6%‡ | (3.2%) | 0.5% |
| ‡   HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 632 CG – 737 | HAN-T – 485 CG – 829 | HAN-T – 940 CG – 964 | HAN-T – 2,057 CG – 2,530 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total rural subgroup rate exceeded the urban subgroup rate in 2020 and 2021. The rates for both subgroups rose from 2019 to 2021 and declined from 2019 to 2021 (Exhibit F-98).

**Exhibit F-98 - HAN Urban/Rural Subgroups**
**Mental Health - 7-Day Follow-up - Ages 6 to 20**



|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 58.2% | 62.6% | 50.9% |
|  | **Rural** | 60.2% | 70.9% | 57.3% |

*Findings* – HAN Total Population and National Benchmark

The HAN and national benchmark measures differed slightly with respect to age ranges. The HAN population includes ages 6 to 20 while the national benchmark includes ages 6 to 17.

The three-year pooled rate for the SoonerCare HAN total population exceeded the national benchmark rate by 13 percentage points (Exhibit F-99).

(Caution: the benchmark population characteristics were not matched to the OHCA groups to minimize differences in the populations. The data is presented for informational purposes only.)



Exhibit F-99 - HAN Total versus Benchmark
Mental Health Follow-up - 7 Days
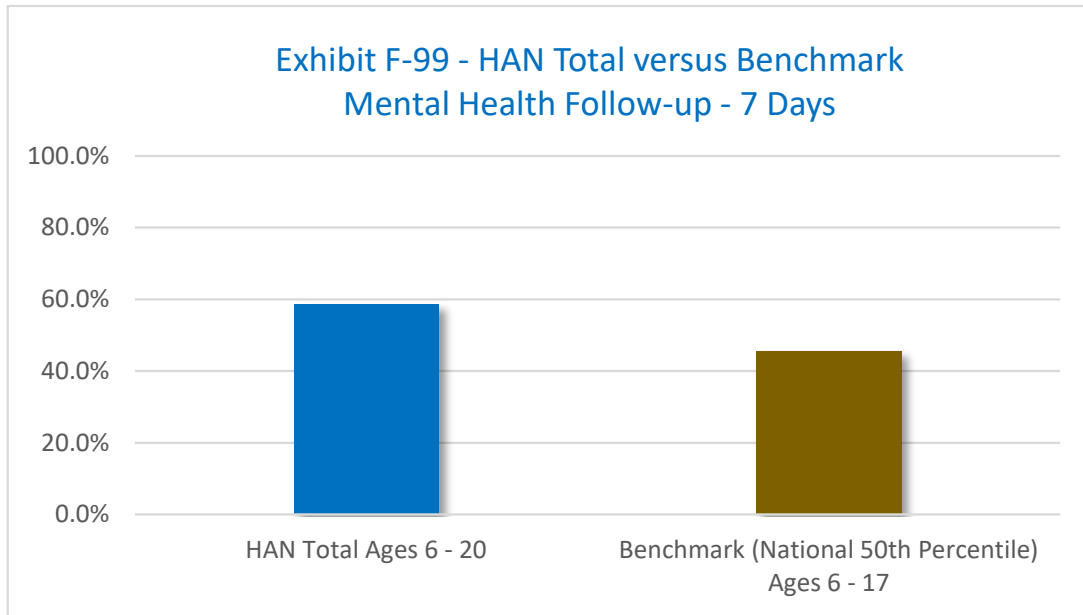
|  | HAN Total | Benchmark |
|---|---|---|
| Compliance Rate | 58.6% | 45.6% |

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HAN total population in the prior waiver period (2016 to 2018). The compliance rate rose from approximately 55 percent in 2016 to 65 percent in 2020, before declining to 52 percent in 2021 (Exhibit F-100).

Exhibit F-100 - HAN - Total - Prior and Current Periods
Mental Health - 7-Day Follow-up - Ages 6 to 20
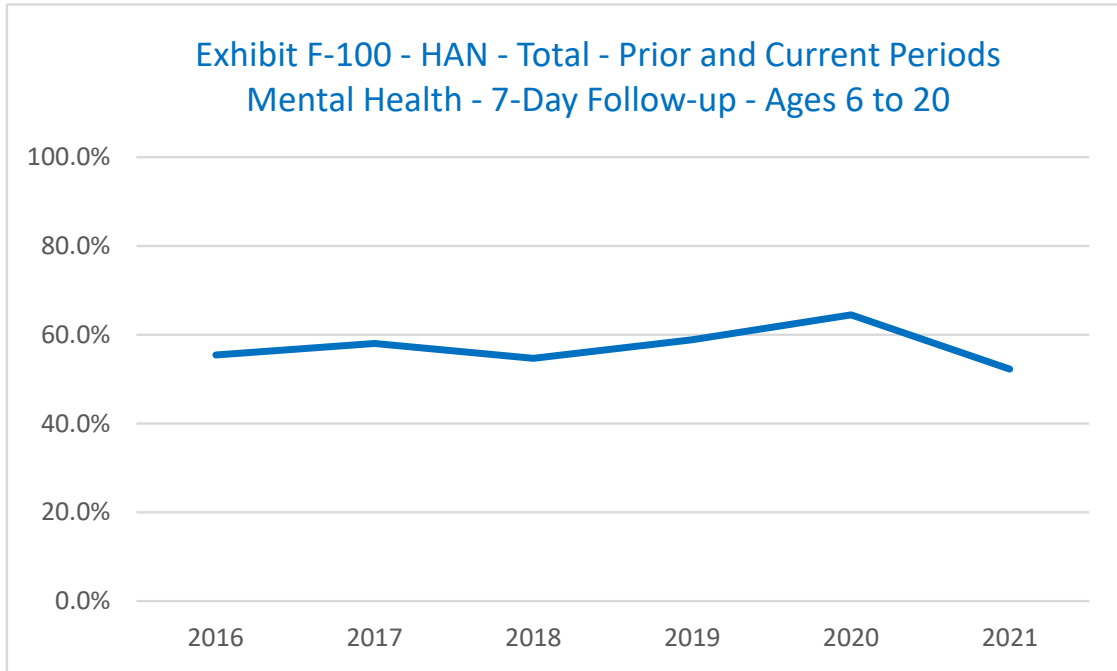
|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| HAN (Total) | 55.4% | 58.0% | 54.7% | 58.9% | 64.5% | 52.3% |

# Mental Health – Follow-up after Hospitalization for Mental Illness – 7 Days – Ages 21 and Older

*Findings* – HAN Total Population

Approximately 48 percent of HAN total members and 48 percent of comparison group members were compliant on this measure across the three years (Exhibit F-101). The compliance rate for both populations declined from 2019 to 2020 before rising again from 2020 to 2021.



Exhibit F-101 - HAN - Total
Mental Health - 7-Day Follow-up - Ages 21 and Older

The difference between the HAN total and comparison group compliance rates was not statistically significant in any of the individual years. It also was not statistically significant for the three-year pooled data (Exhibit F-102).

| Exhibit F-102 – HAN (Total) – Mental Health – 7-Day Follow-up – Ages 21 and Older | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 56.8% | 42.9% | 45.3% | 48.3% |
| Comparison Group | 50.7% | 43.4% | 48.3% | 47.5% |
| Difference | 6.1% | (0.5%) | (3.0%) | 0.8% |
| ‡   HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 155 CG – 218 | HAN-T – 70 CG – 97 | HAN-T – 506 CG – 451 | HAN-T – 731 CG – 766 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total rural subgroup rate exceeded the urban subgroup rate in 2019 and 2021; the urban subgroup rate exceeded the rural subgroup rate in 2020. The urban subgroup rate declined from 2019 to 2021 while the rural subgroup rate declined from 2019 to 2020 and rose again from 2020 to 2021 (Exhibit F-103)[53].



Exhibit F-103 - HAN Urban/Rural Subgroups
Mental Health - 7-Day Follow-up - Ages 21 and Older

|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 54.6% | 46.3% | 44.7% |
|  | **Rural** | 63.9% | 35.7% | 48.3% |

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[53] See cautionary note in Introduction to Section F regarding year-over-year variance in measures with small denominators. HAN rural population denominator for this measure was less than 100 in each of the three years.

*Findings* – HAN Total Population and National Benchmark

The HAN and national benchmark measures differed slightly with respect to age ranges. The HAN population includes ages 21 and older while the national benchmark includes ages 18 and older.

The three-year pooled rate for the SoonerCare HAN total population exceeded the national benchmark rate by approximately 15 percentage points (Exhibit F-104).

(Caution: the benchmark population characteristics were not matched to the OHCA groups to minimize differences in the populations. The data is presented for informational purposes only.)



Exhibit F-104 - HAN Total versus Benchmark
Mental Health Follow-up - 7 Days
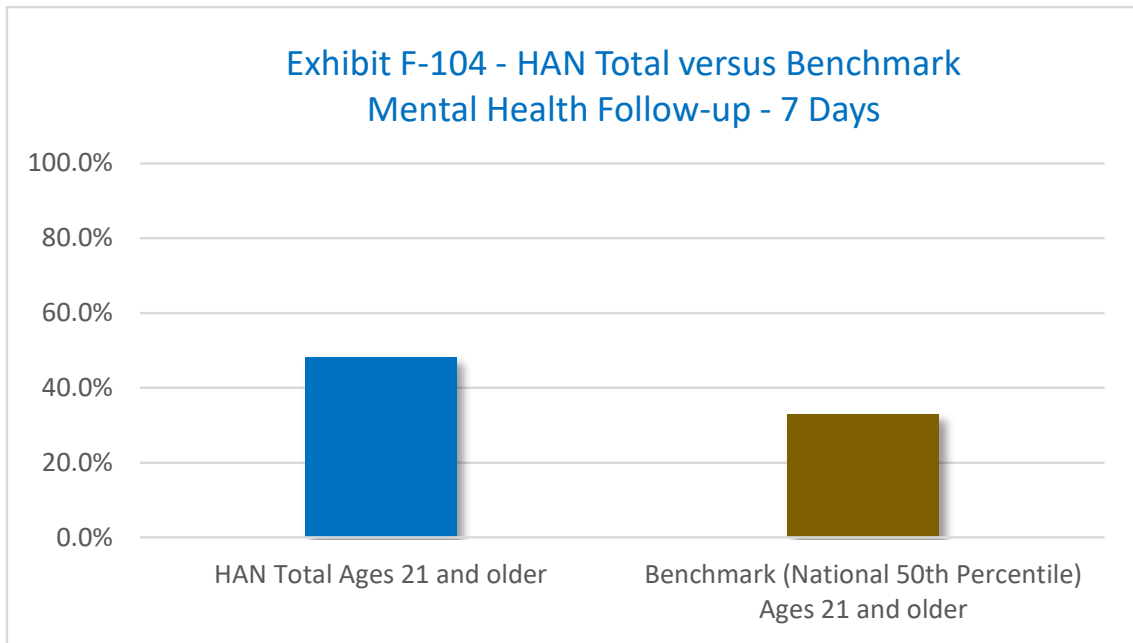
|  | HAN Total | Benchmark |
|---|---|---|
| Compliance Rate | 48.3% | 33.1% |

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HAN total population in the prior waiver period (2016 to 2018). The compliance rate declined gradually from approximately 69 percent in 2016 to 43 percent in 2020 and rising again slightly to 45 percent in 2021 (Exhibit F-105).

**Exhibit F-105 - HAN - Total - Prior and Current Periods Mental Health - 7-Day Follow-up - Ages 21 and Older**

|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| HAN (Total) | 69.4% | 60.7% | 63.3% | 56.8% | 42.9% | 45.3% |

## Mental Health – Follow-up after Hospitalization for Mental Illness – 30 Days – Ages 6 to 20

*Findings* – HAN Total Population

Approximately 84 percent of HAN total members and 85 percent of comparison group members were compliant on this measure across the three years (Exhibit F-106). The compliance rate for the HAN total population rose from 2019 to 2020, before declining from 2020 to 2021. The compliance rate for the comparison group declined from 2019 to 2021.
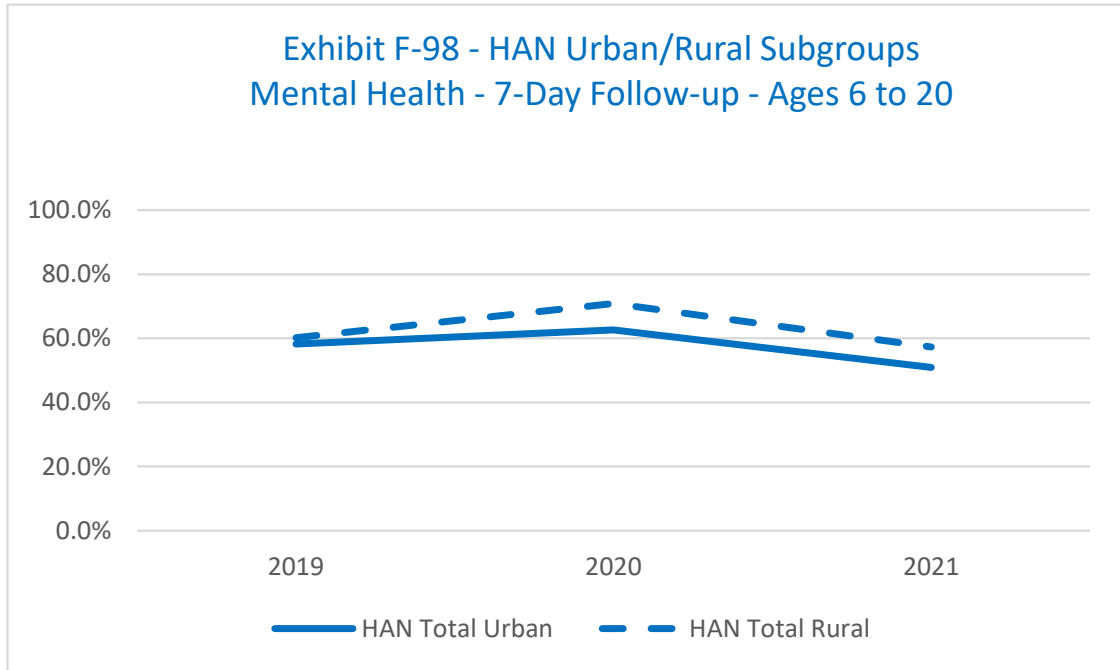


The difference between the HAN total and comparison group compliance rates was statistically significant in 2019. It was not statistically significant for the three-year pooled data (Exhibit F-107).

| Exhibit F-107 – HAN (Total) – Mental Health – 30-Day Follow-up – Ages 6 to 20 | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 84.2% | 86.6% | 79.8% | 83.5% |
| Comparison Group | 87.5% | 86.1% | 79.9% | 84.5% |
| Difference | (3.3%)‡ | 0.5% | (0.1%) | (1.0%) |
| ‡   HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 632 CG – 737 | HAN-T – 485 CG – 829 | HAN-T – 940 CG – 964 | HAN-T – 2,057 CG – 2,530 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total rural subgroup rate exceeded the urban subgroup rate in 2020 and 2021. The rates for both subgroups rose from 2019 to 2021 and declined from 2019 to 2021 (Exhibit F-108).



Exhibit F-108 - HAN Urban/Rural Subgroups
Mental Health - 30-Day Follow-up - Ages 6 to 20

|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 84.5% | 84.4% | 79.0% |
|  | **Rural** | 83.9% | 93.7% | 82.8% |

*Findings* – HAN Total Population and National Benchmark

The HAN and national benchmark measures differed slightly with respect to age ranges. The HAN population includes ages 6 to 20 while the national benchmark includes ages 6 to 17.

The three-year pooled rate for the SoonerCare HAN total population exceeded the national benchmark rate by approximately 17 percentage points (Exhibit F-109).

(Caution: the benchmark population characteristics were not matched to the OHCA groups to minimize differences in the populations. The data is presented for informational purposes only.)



Exhibit F-109 - HAN Total versus Benchmark
Mental Health Follow-up - 30 Days
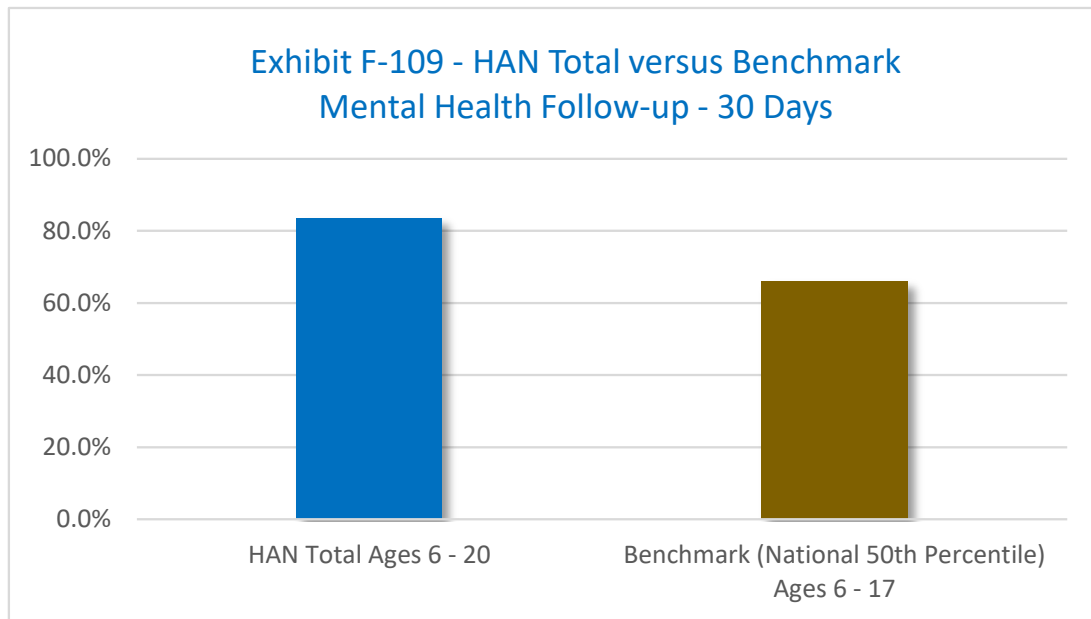
|  | HAN Total | Benchmark |
|---|---|---|
| Compliance Rate | 83.5% | 66.0% |

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HAN total population in the prior waiver period (2016 to 2018). The compliance rate declined from approximately 89 percent in 2016 to 82 percent in 2018, before rising to 87 percent in 2020 and declining again to 80 percent in 2021 (Exhibit F-110).

**Exhibit F-110 - HAN - Total - Prior and Current Periods**
**Mental Health - 30-Day Follow-up - Ages 6 to 20**
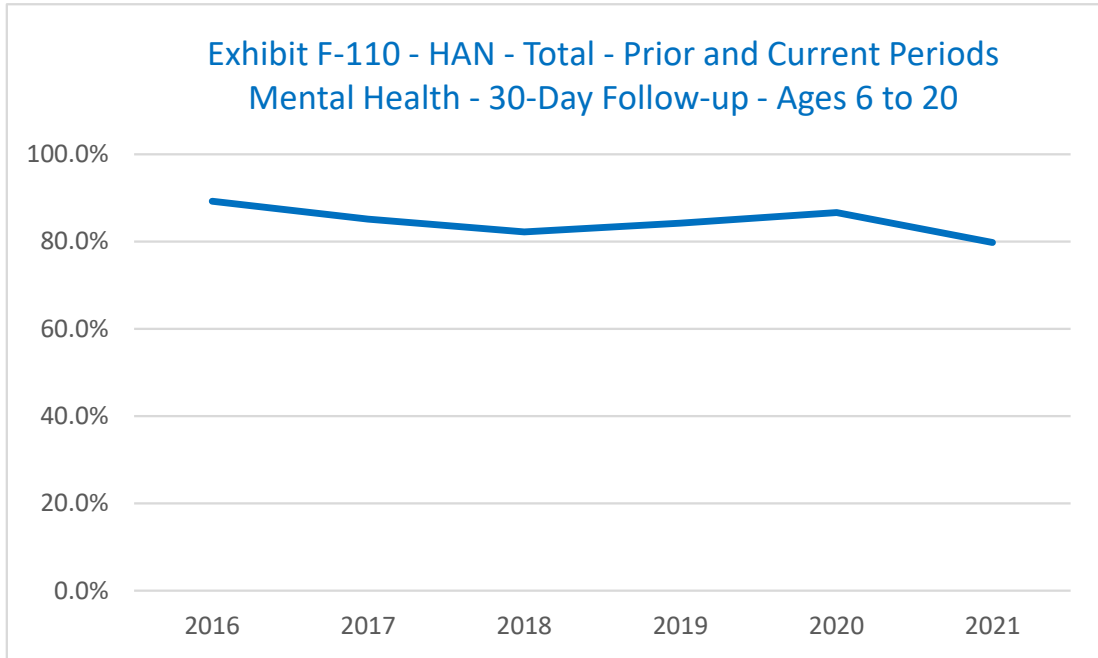
|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| HAN (Total) | 89.2% | 85.1% | 82.2% | 84.2% | 86.6% | 79.8% |

## Mental Health – Follow-up after Hospitalization for Mental Illness – 30 Days – Ages 21 and Older

*Findings* – HAN Total Population

Approximately 75 percent of HAN total members and approximately 72 percent of comparison group members were compliant on this measure across the three years (Exhibit F-111). The compliance rate for both populations declined from 2019 to 2021.
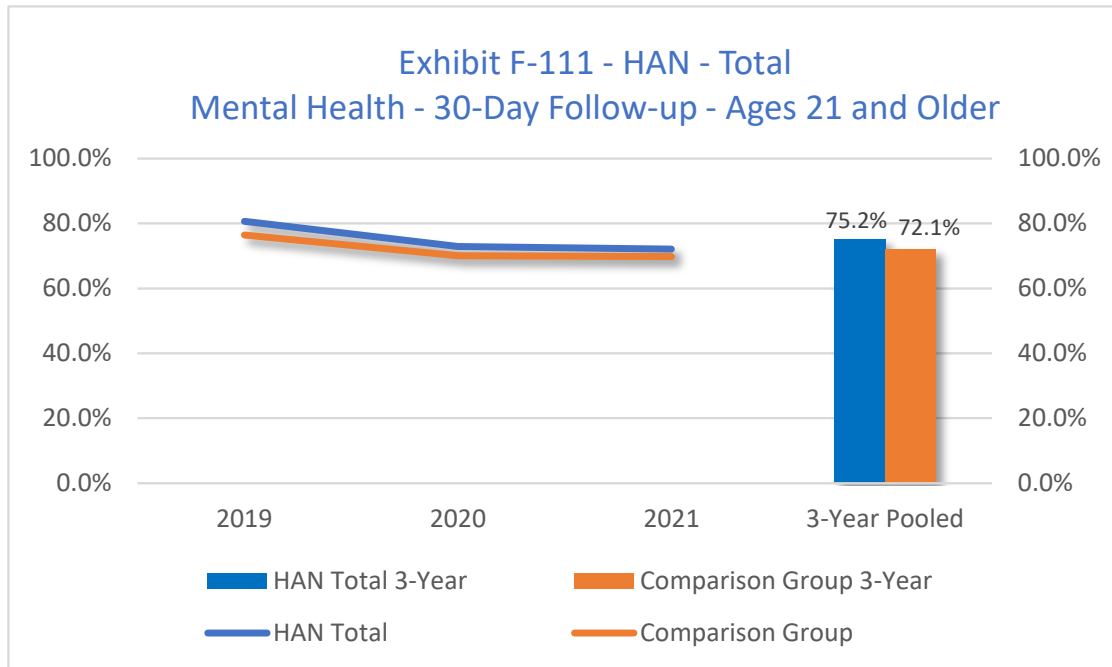


Exhibit F-111 - HAN - Total
Mental Health - 30-Day Follow-up - Ages 21 and Older

The difference between the HAN total and comparison group compliance rates was not statistically significant in any of the individual years. It also was not statistically significant for the three-year pooled data (Exhibit F-112).

| Exhibit F-112 – HAN (Total) – Mental Health – 30-Day Follow-up – Ages 21 and Older | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 80.6% | 72.9% | 72.1% | 75.2% |
| Comparison Group | 76.4% | 70.1% | 69.8% | 72.1% |
| Difference | 4.2% | 2.8% | 2.3% | 3.1% |
| ‡ HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 155 CG – 218 | HAN-T – 70 CG – 97 | HAN-T – 506 CG – 451 | HAN-T – 731 CG – 766 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total rural subgroup rate exceeded the urban subgroup rate in 2019 and 2021; the urban subgroup rate exceeded the rural subgroup rate in 2020. The urban subgroup rate declined from 2019 to 2021 while the rural subgroup rate declined from 2019 to 2020 and rose again from 2020 to 2021 (Exhibit F-113).



Exhibit F-113 - HAN Urban/Rural Subgroups
Mental Health - 30-Day Follow-up - Ages 21 and Older

|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 79.0% | 75.9% | 71.9% |
|  | **Rural** | 86.1% | 64.3% | 74.2% |

*Findings* – HAN Total Population and National Benchmark

The HAN and national benchmark measures differed slightly with respect to age ranges. The HAN population includes ages 21 and older while the national benchmark includes ages 18 and older.

The three-year pooled rate for the SoonerCare HAN total population exceeded the national benchmark rate by approximately 21 percentage points (Exhibit F-114).
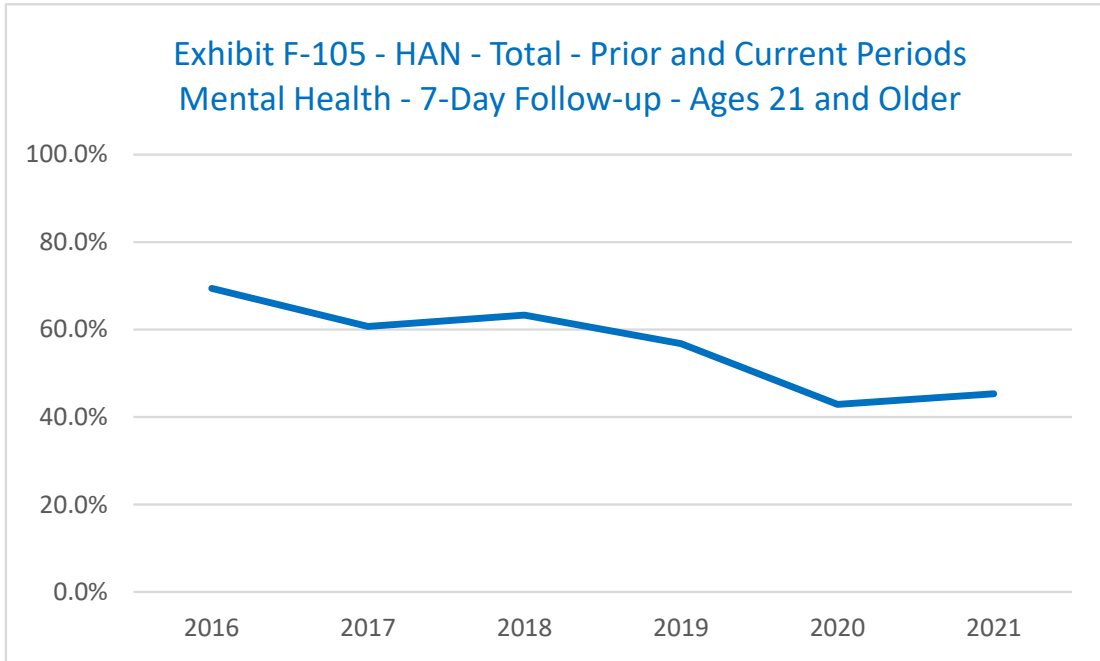
(Caution: the benchmark population characteristics were not matched to the OHCA groups to minimize differences in the populations. The data is presented for informational purposes only.)

**Exhibit F-114 - HAN Total versus Benchmark**
**Mental Health Follow-up - 30 Days**
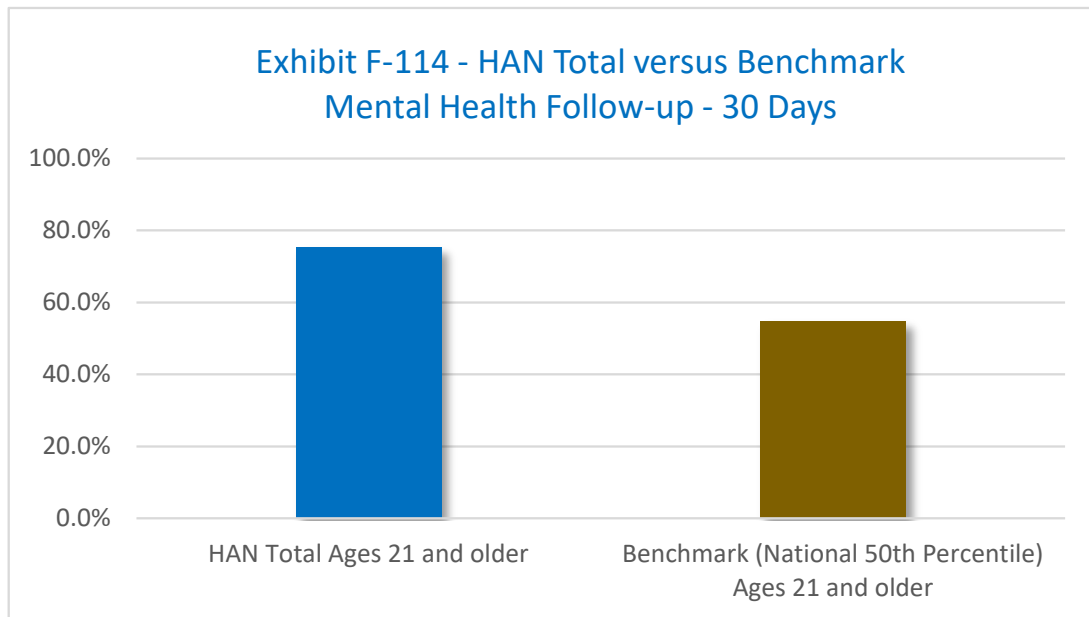
| | HAN Total | Benchmark |
|---|---|---|
| Compliance Rate | 75.2% | 54.7% |

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HAN total population in the prior waiver period (2016 to 2018). The compliance rate declined gradually from approximately 89 percent in 2016 to 72 percent in 2021 (Exhibit F-115).

## Exhibit F-115 - HAN - Total - Prior and Current Periods
## Mental Health - 30-Day Follow-up - Ages 21 and Older



|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| HAN (Total) | 88.9% | 85.7% | 85.7% | 80.6% | 72.9% | 72.1% |

## HAN Quality of Care – Social Determinants of Health

A stratified sample of SoonerCare HAN members was surveyed concerning social determinants of health (SDOH). PHPG surveyed 125 care managed members whose profile included an indicator that the HAN had provided assistance with SDOH in 2021. The survey inquired about the nature of the assistance, its importance to the member in addressing social service needs and/or reducing barriers to care and the member's satisfaction with help provided. Appendix 6 contains a copy of the survey instrument.

Although a structured survey instrument was used, the findings should be considered qualitative due to the sample selection method. Findings are not necessarily representative of the entire SoonerCare HAN population.

### *Findings* – HAN Care Managed Population – Nature of Assistance

Respondents reported receiving assistance with a variety of SDOH-related needs (multiple responses per member were permitted). The most common areas cited were health education and help resolving food insecurity, followed by assistance with utilities, clothing and housing/rent (Exhibit F-116)[54].



Exhibit F-116 - HAN - Care Managed
SDOH - Areas of Assistance

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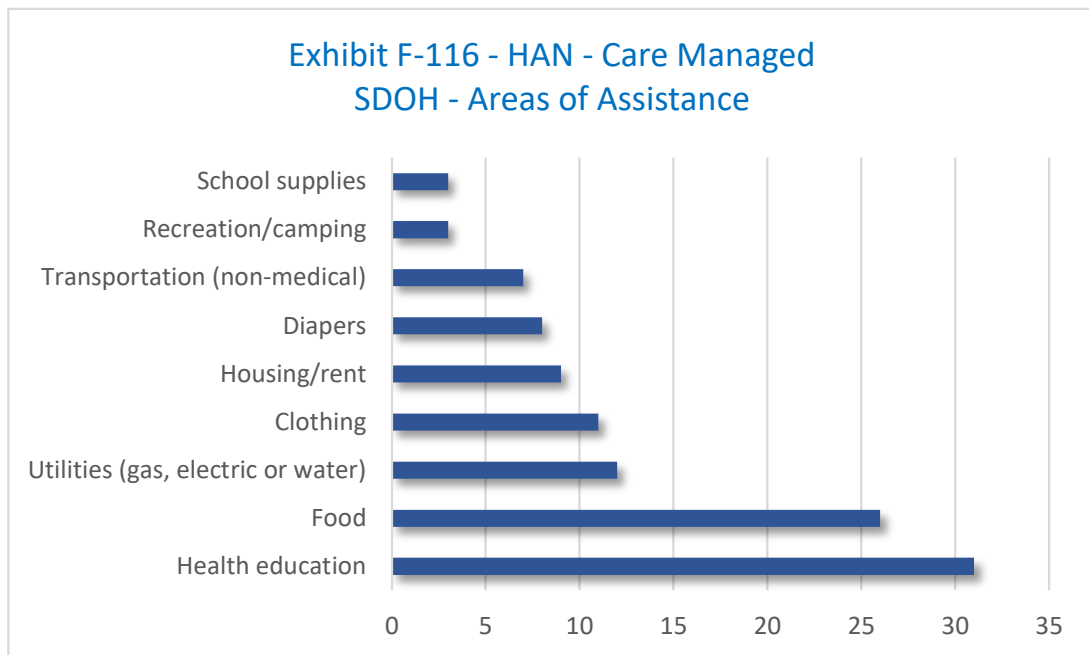
[54] Areas mentioned by fewer than three respondents not shown on chart.

*Findings* – HAN Care Managed Population – Importance and Satisfaction

Respondents were asked to rate the importance of the help they received. Ninety-four percent rated the help as either very or somewhat important (Exhibit F-117).

**Exhibit F-117 - HAN - Care Managed Importance of SDOH Assistance**

Not at all Important 3%
Not Very Important 3%
Somewhat Important 16%
Very Important 78%
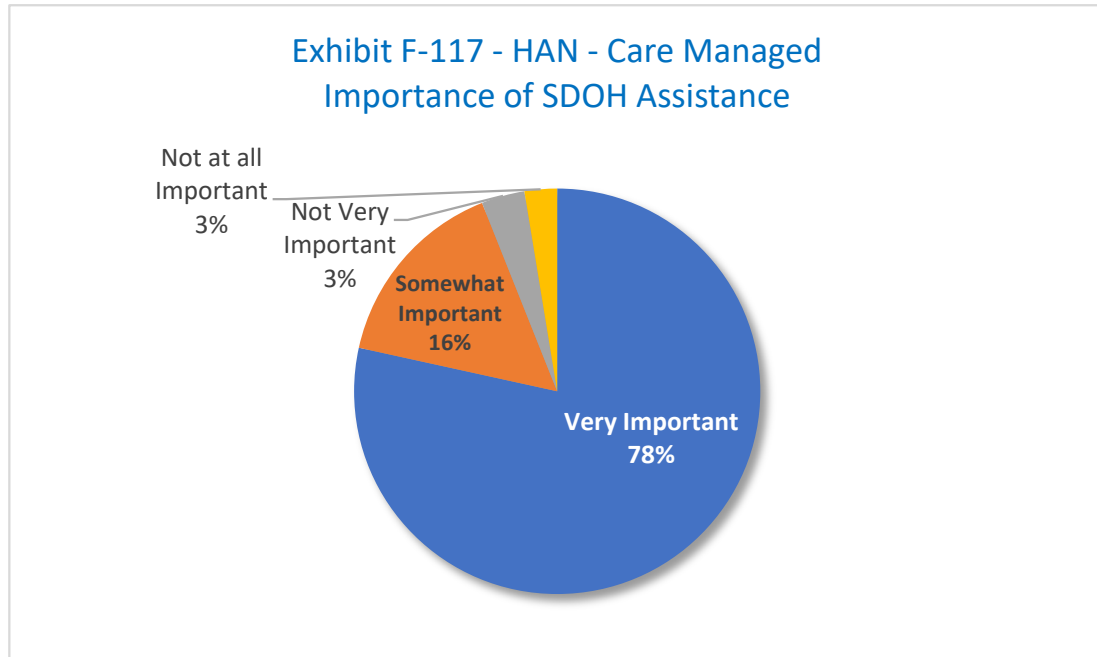
Respondents also were asked to rate their satisfaction with the help received. All but one respondent gave a rating of very satisfied; the remaining respondent gave a rating of somewhat satisfied.

In addition to providing responses to the structured survey questions, respondents were invited to describe their experience in their own words. A representative sample of respondent comments is provided below.

*"(My care manager) is everything to me. She is my light. She uplifts me every time we talk. She helps me maneuver through the health care and insurance process. She goes above and beyond like once my car died and no one would help me. (She) came out to my trailer, took my dead battery and went and got a new one then put it in. That meant so much to me."*

*"(My care manager) is like a sister to me. I felt like I was falling apart before I started talking to her. She helped me get through my anxiety about my surgery. She has also brought me food. "*

*"(My care manager) always seems to know when to call me. I would be lost without her calls to help me down. I have been through a lot and still am and her calls save me. She also helped me to get kids furniture for my grandbabies I am now raising. I bless (her) and SoonerCare and hope I have them both 'til I die."*

## Rating of Health Care – Children and Adults

### *Findings* – HAN Total Population

Seventy-two percent of HAN adult members and approximately 73 percent of comparison group adult members rated their health care as 8, 9 or 10 on a scale of 0 (worst health care possible) to 10 (best health care possible)[55].  Approximately 87 percent of parents/caretakers of HAN child members and 85 percent of comparison group parents/caretakers rated their health care as 8, 9 or 10 (Exhibit F-118).
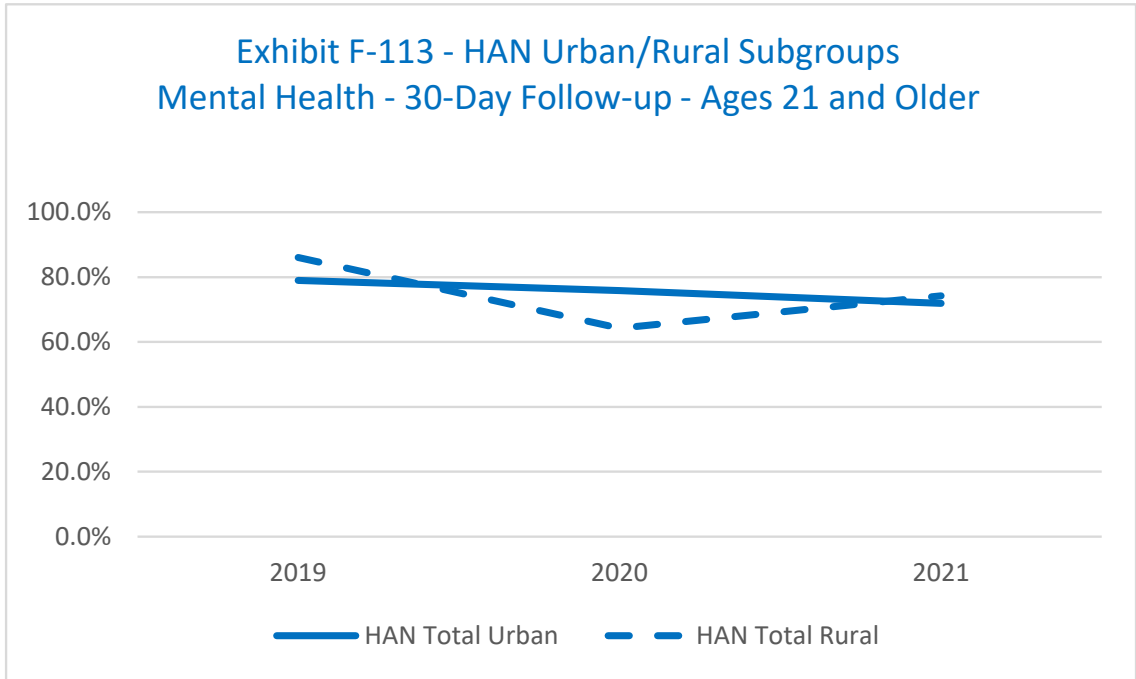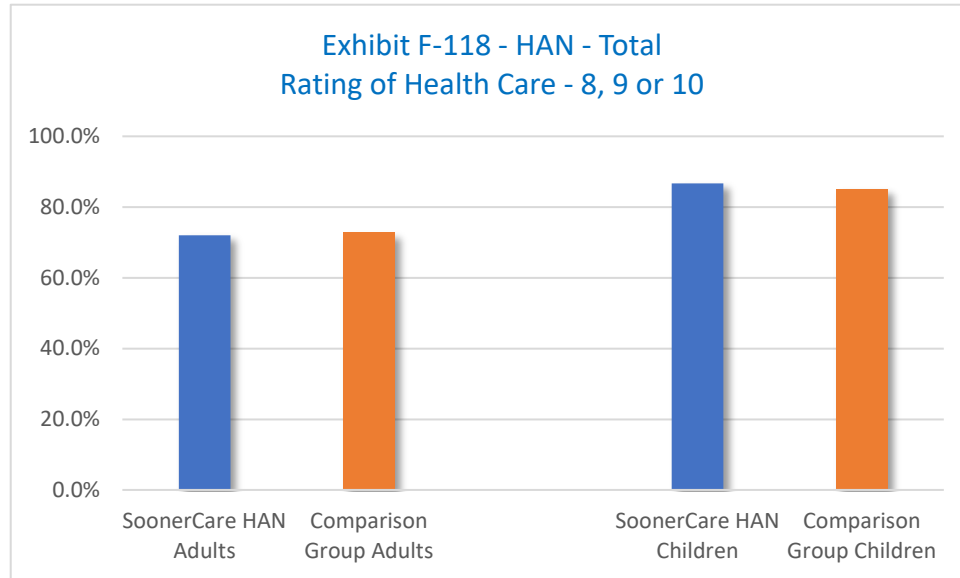
**Exhibit F-118 - HAN - Total**
**Rating of Health Care - 8, 9 or 10**

The difference between the HAN total and comparison group compliance rates was not statistically significant for either group (Exhibit F-119).

| Exhibit F-119 – HAN (Total) – Rating of Health Care– Percent Rating 8, 9 or 10 | | |
|---|---|---|
| | Adults | Children |
| HAN (Total) | 72.0% | 86.7% |
| Comparison Group | 72.8% | 85.1% |
| Difference | (0.8%) | 1.6% |
| ‡   HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | |
| Sample Sizes | Adults | HAN-T - 33 CG – 213 | Parents/Caretakers of Children | HAN-T - 283 CG – 668 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | |

[55] CAHPS question: Using any number from 0 to 10, where 0 is the worst health care possible and 10 is the best health care possible, what number would you use to rate all your (your child's) health care in the last six months?

*Findings* – HAN Total Population and National Benchmark

The 2021 national benchmark rate for adults exceeded the SoonerCare HAN adult rate by approximately six percentage points (Exhibit F-120).

The 2021 national benchmark rate for children exceeded the SoonerCare HAN children rate by approximately two percentage points.

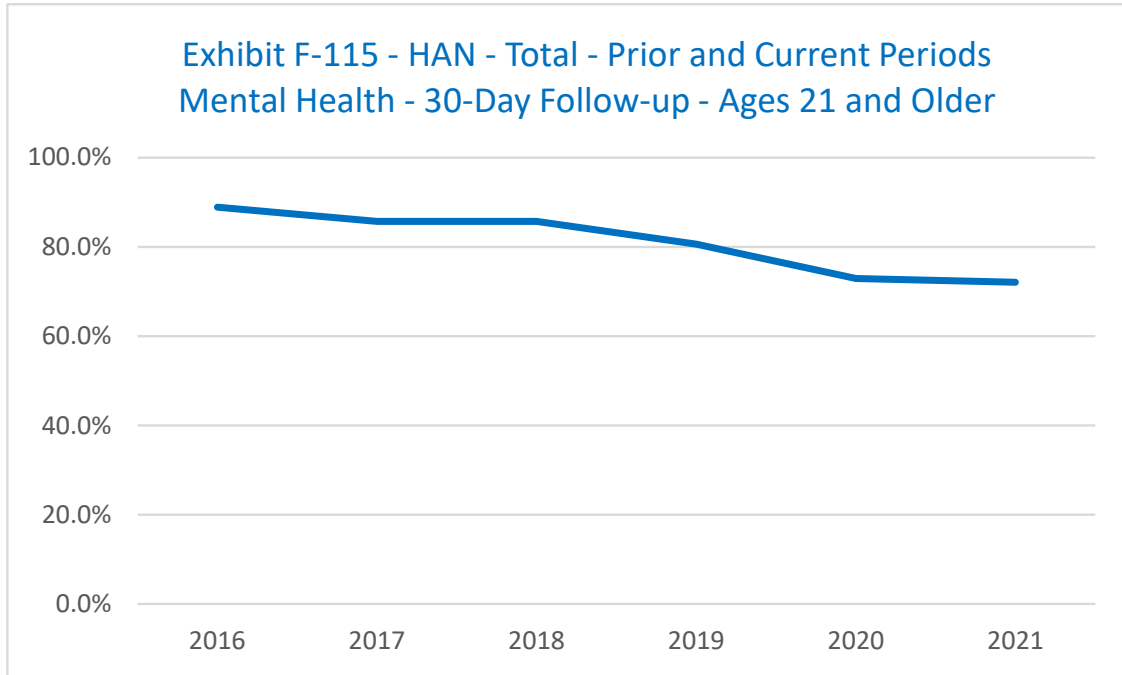(Caution: the benchmark population characteristics were not matched to the OHCA groups to minimize differences in the populations. The data is presented for informational purposes only.)



Exhibit F-120 - HAN - Total versus Benchmark
Rating of Health Care - 8, 9 or 10
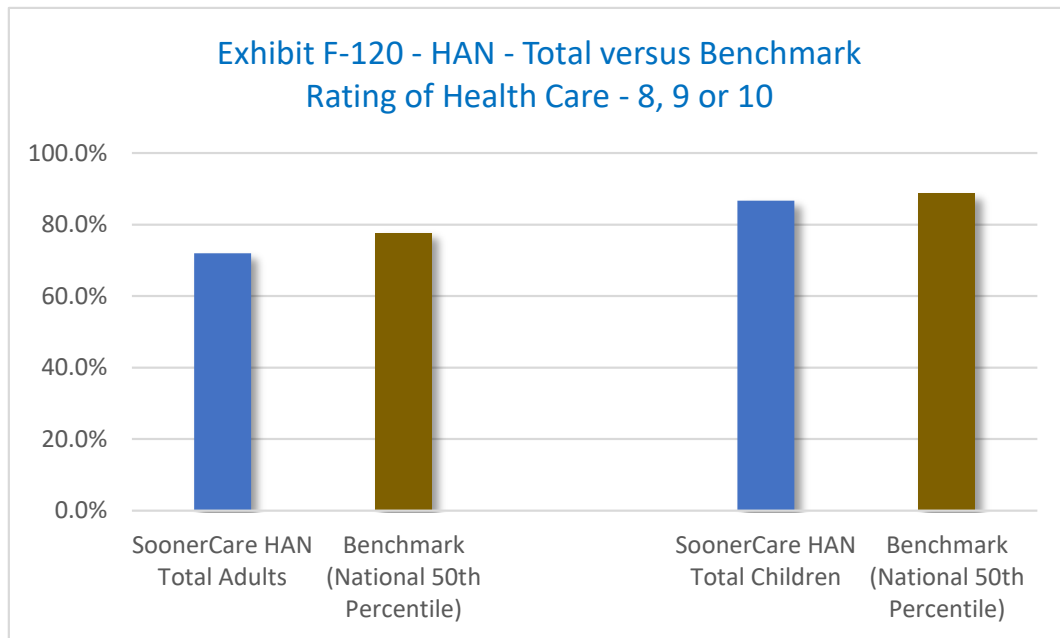
|  | HAN Adult | Benchmark | HAN Child | Benchmark |
|---|---|---|---|---|
| HAN (Total) | 72.0% | 77.7% | 86.7% | 88.8% |

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was calculated for the HAN total population in the 2018 CAHPS survey period. The percentage rating their health care 8, 9 or 10 increased five percentage points among adults and declined approximately eight percentage points among parents/caretakers of children (Exhibit F-121).
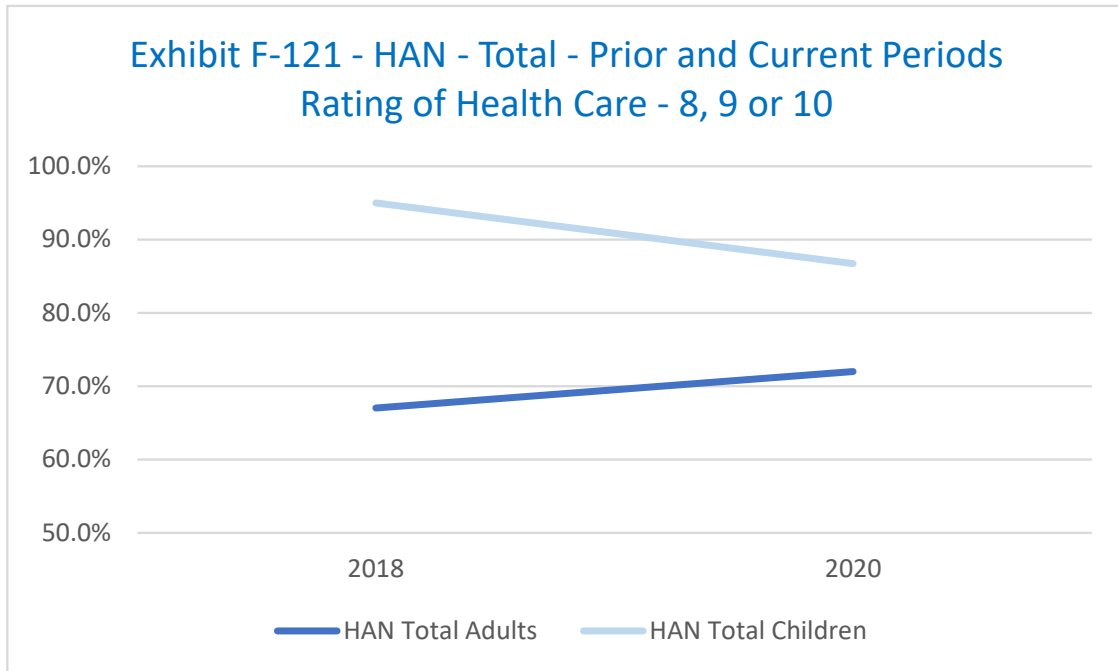
**Exhibit F-121 - HAN - Total - Prior and Current Periods Rating of Health Care - 8, 9 or 10**



Note: Y-axis does not begin at 0.

|  | HAN Adult 2018 | HAN Adult 2020 | HAN Child 2018 | HAN Child 2020 |
|---|---|---|---|---|
| HAN (Total) | 67.0% | 72.0% | 95.0% | 86.7% |

## Rating of Health Plan – Children and Adults

*Findings* – HAN Total Population

Approximately 80 percent of HAN adult members and approximately 71 percent of comparison group adult members rated their health plan (SoonerCare) as 8, 9 or 10 on a scale of 0 (worst health plan possible) to 10 (best health plan possible)[56].   Eighty-seven percent of parents/caretakers of HAN child members and approximately 81 percent of comparison group parents/caretakers rated their health plan as 8, 9 or 10 (Exhibit F-122).



Exhibit F-122 - HAN - Total
Rating of Health Plan - 8, 9 or 10
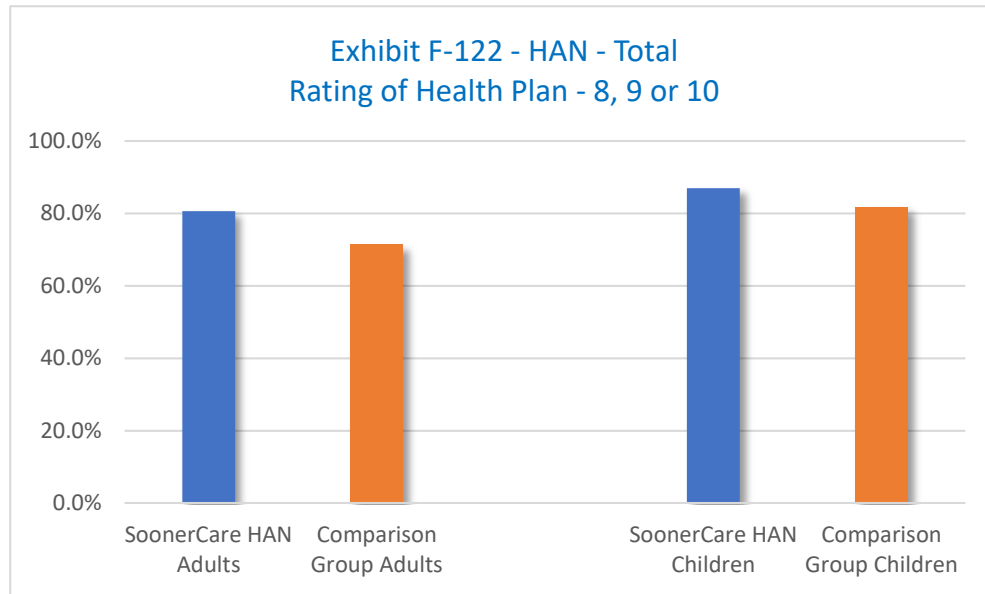
The difference between the adult HAN total and comparison group compliance rates was not statistically significant; the difference between parents/caretakers of HAN child members and comparison group parents/caretakers was statistically significant (Exhibit F-123).

| Exhibit F-123 – HAN (Total) – Rating of Health Plan – Percent Rating 8, 9 or 10 | | |
|---|---|---|
| | Adults | Children |
| HAN (Total) | 80.6% | 87.0% |
| Comparison Group | 71.3% | 81.6% |
| Difference | 9.3% | 5.4%‡ |
| ‡   HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | |
| Sample Sizes | Adults | HAN-T - 33 CG – 213 | Parents/Caretakers of Children | HAN-T - 283 CG – 668 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | |

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[56] CAHPS question: Using any number from 0 to 10, where 0 is the worst health plan possible and 10 is the best health plan possible, what number would you use to rate your (your child's) health plan?

*Findings* – HAN Total Population and National Benchmark

The rate for SoonerCare HAN adults exceeded the 2021 national benchmark rate by two percentage points (F-124).

The 2021 national benchmark rate for children exceeded the SoonerCare HAN children rate by less than one percentage point.

(Caution: the benchmark population characteristics were not matched to the OHCA groups to minimize differences in the populations. The data is presented for informational purposes only.)

**Exhibit F-124 - HAN - Total versus Benchmark Rating of Health Plan - 8, 9 or 10**
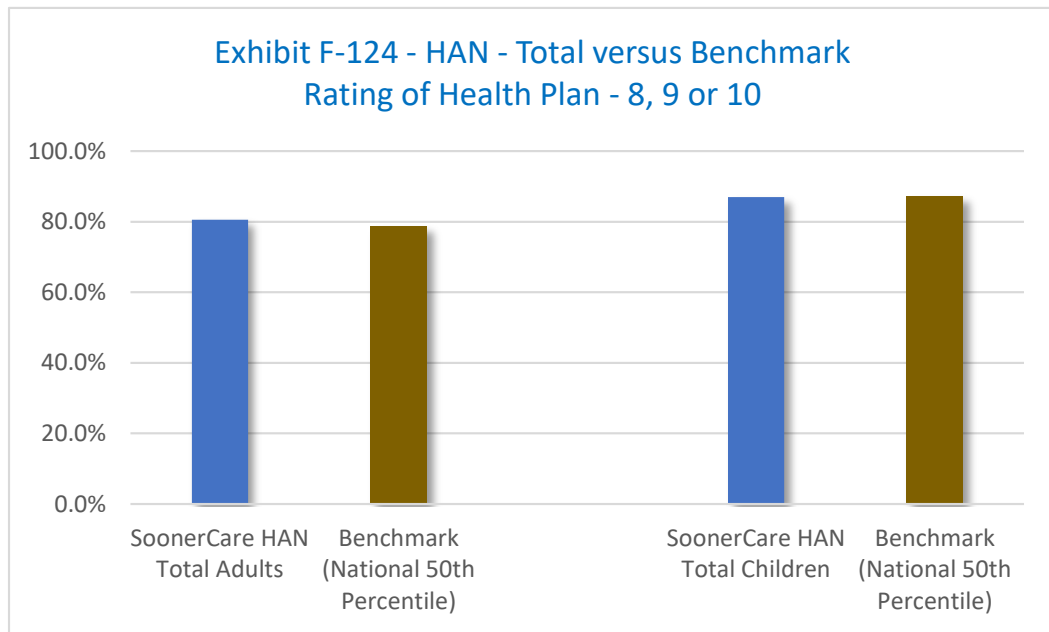
| | HAN Adult | Benchmark | HAN Child | Benchmark |
|---|---|---|---|---|
| HAN (Total) | 80.6% | 78.6% | 87.0% | 87.2% |

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was calculated for the HAN total population in the 2018 CAHPS survey period. The percentage rating their health plan 8, 9 or 10 increased 18 percentage points among adults and declined three percentage points among parents/caretakers of children (Exhibit F-125).
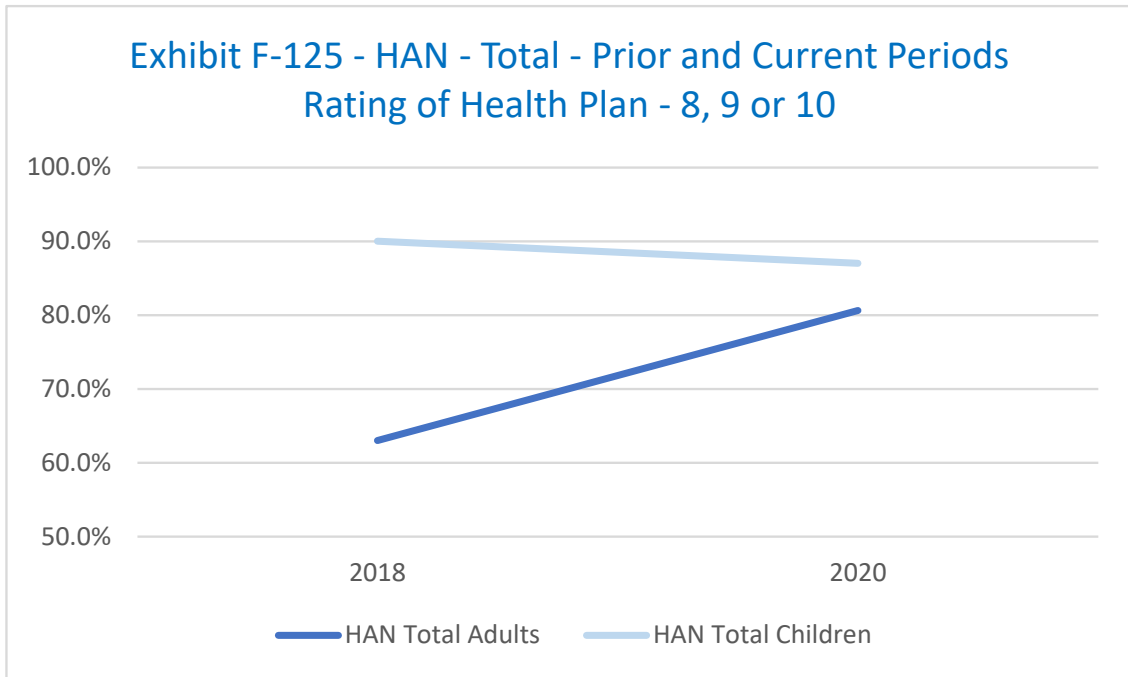


Note: Y-axis does not begin at 0.

|  | HAN Adult 2018 | HAN Adult 2020 | HAN Child 2018 | HAN Child 2020 |
|---|---|---|---|---|
| HAN (Total) | 63.0% | 80.6% | 90.0% | 87.0% |

## Rating of Personal Doctor – Children and Adults

*Findings* – HAN Total Population

Eighty-eight percent of HAN adult members and approximately 83 percent of comparison group adult members rated their personal doctor as 8, 9 or 10 on a scale of 0 (worst doctor possible) to 10 (best doctor possible)[57]. Approximately 90 percent of parents/caretakers of HAN child members and 87 percent of comparison group parents/caretakers rated their personal doctor as 8, 9 or 10 (Exhibit F-126).

**Exhibit F-126 - HAN - Total**
**Rating of Personal Doctor - 8, 9 or 10**



The difference between the HAN total and comparison group compliance rates was not statistically significant for either group (Exhibit F-127).

| Exhibit F-127 – HAN (Total) – Rating of Personal Doctor – Percent Rating 8, 9 or 10 | | |
|---|---|---|
| | Adults | Children |
| HAN (Total) | 88.0% | 89.6% |
| Comparison Group | 83.3% | 87.3% |
| Difference | 4.7% | 2.3%‡ |
| ‡ HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | |
| Sample Sizes | Adults | HAN-T - 33 CG – 213 | Parents/Caretakers of Children | HAN-T - 283 CG – 668 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | |

[57] CAHPS question: Using any number from 0 to 10, where 0 is the worst personal doctor possible and 10 is the best personal doctor possible, what number would you use to rate your (your child's) personal doctor?

*Findings* – HAN Total Population and National Benchmark

The rate for SoonerCare HAN adults exceeded the 2021 national benchmark rate by approximately five percentage points (Exhibit F-128).

The 2021 national benchmark rate for children exceeded the SoonerCare HAN children rate by approximately one percentage point.

(Caution: the benchmark population characteristics were not matched to the OHCA groups to minimize differences in the populations. The data is presented for informational purposes only.)



Exhibit F-128 - HAN - Total versus Benchmark Rating of Personal Doctor - 8, 9 or 10
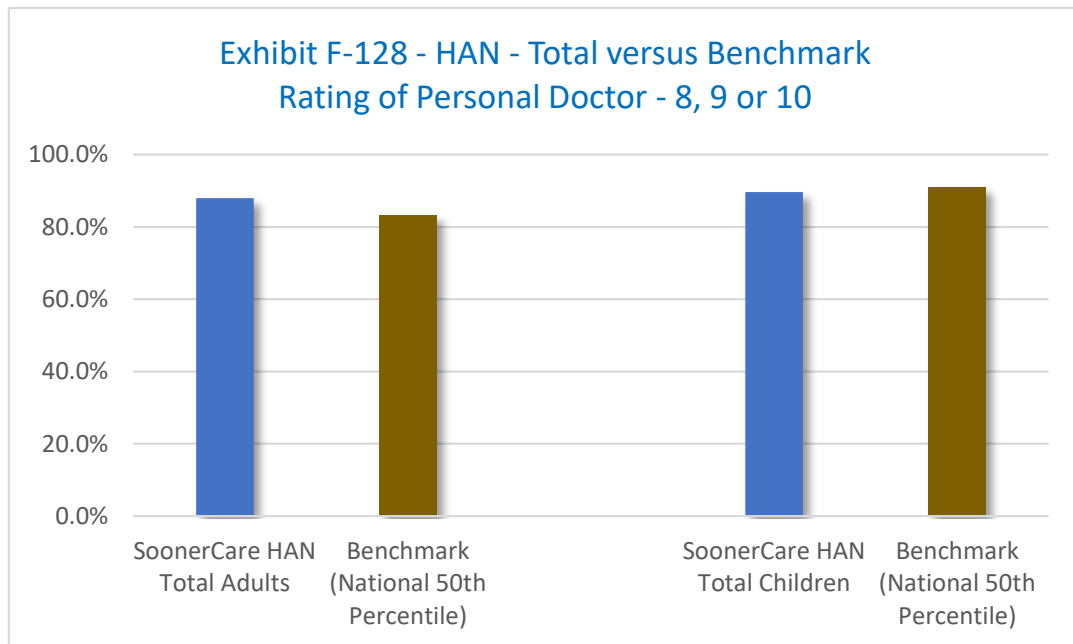
|  | HAN Adult | Benchmark | HAN Child | Benchmark |
|---|---|---|---|---|
| HAN (Total) | 88.0% | 83.1% | 89.6% | 90.6% |

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was calculated for the HAN total population in the 2018 CAHPS survey period. The percentage rating their personal doctor 8, 9 or 10 increased 10 percentage points among adults and approximately four percentage points among parents/caretakers of children (Exhibit F-129).
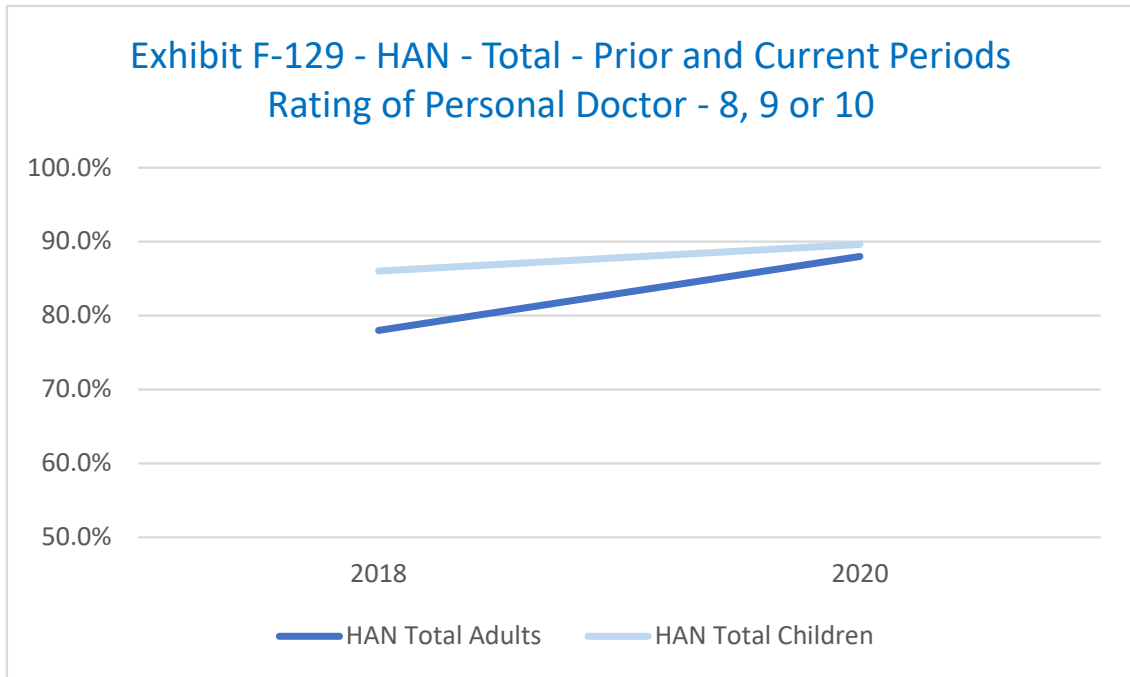
**Exhibit F-129 - HAN - Total - Prior and Current Periods Rating of Personal Doctor - 8, 9 or 10**



Note: Y-axis does not begin at 0.

| | HAN Adult 2018 | HAN Adult 2020 | HAN Child 2018 | HAN Child 2020 |
|---|---|---|---|---|
| HAN (Total) | 78.0% | 88.0% | 86.0% | 89.6% |

## HAN Quality of Care – Members Served within Each PCMH Tier

*Findings* – HAN Total Population

The percentage of members enrolled with a Tier 3 practice remained relatively constant, both during the current waiver period (2019 – 2021) and the prior period (2016 – 2018). The percentage enrolled with a Tier 1 or Tier 2 practice also remained constant (Exhibit F-130).



Exhibit F-130 - HAN - Total - Percent of Members by PCMH Tier - 2016 - 2021
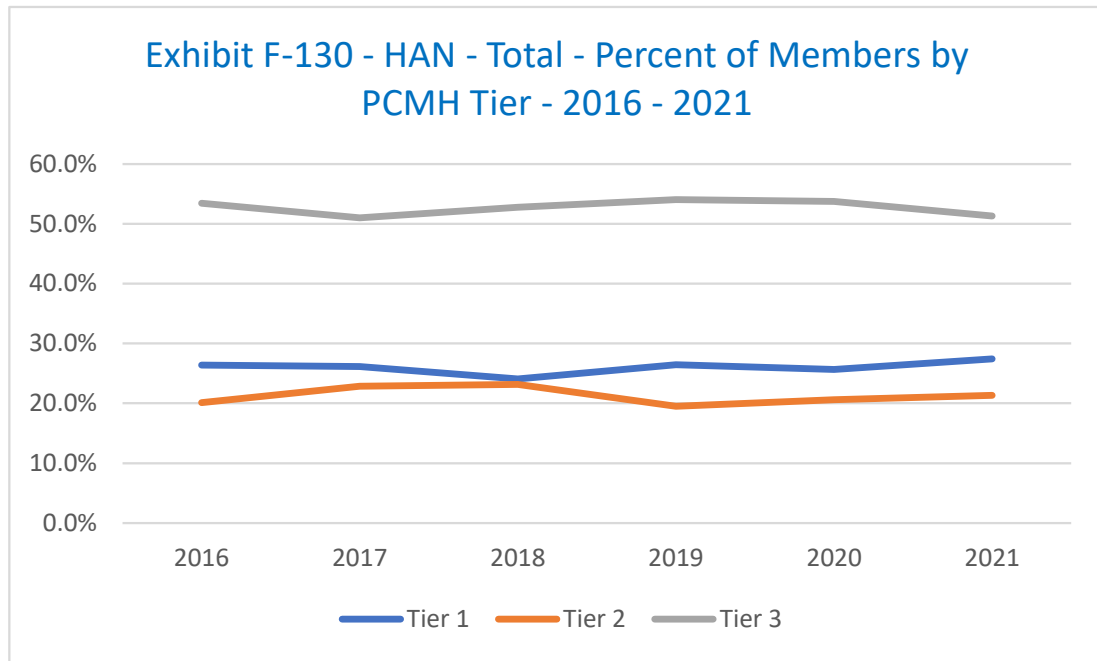
| HAN (Total) – Percent of Members by PCMH Tier | | | | | | |
|---|---|---|---|---|---|---|
| **PCMH Tier** | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
| Tier 1 (Entry) | 26.4% | 26.1% | 24.1% | 26.4% | 25.7% | 27.4% |
| Tier 2 (Advanced) | 20.1% | 22.9% | 23.2% | 19.5% | 20.6% | 21.3% |
| Tier 3 (Optimal) | 53.5% | 51.0% | 52.7% | 54.1% | 53.7% | 51.3% |

Although the portion of HAN members enrolled with a Tier 3 practice has been stable, it is substantially higher than for the non-HAN population, while the portion enrolled with a Tier 1 provider is substantially lower (Exhibit F-131).



Exhibit F-131 - HAN (Total) and Non-HAN
Percent of Members by PCMH Tier - 2021
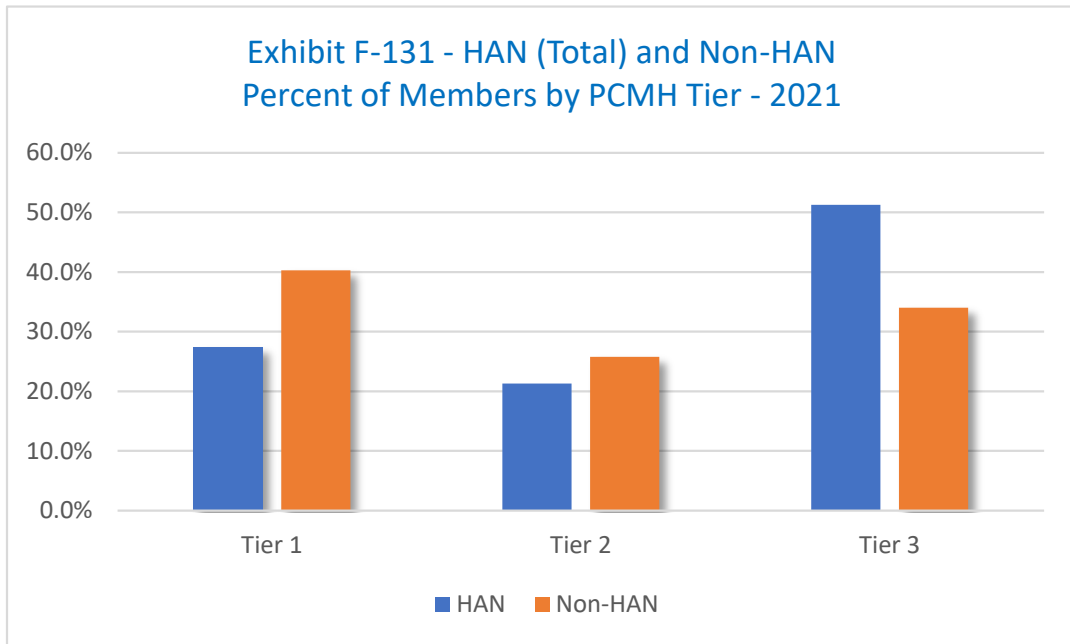
| HAN (Total) and Non-HAN – Percent of Members by PCMH Tier (2021) | | |
|---|---|---|
| **PCMH Tier** | HAN | Non-HAN |
| Tier 1 (Entry) | 27.4% | 40.3% |
| Tier 2 (Advanced) | 21.3% | 25.8% |
| Tier 3 (Optimal) | 51.3% | 34.0% |

## HAN Quality of Care – PCMH Satisfaction

The SoonerCare HANs provided lists of PCMH practices that received assistance in 2021 to raise their Medicaid tier level (and associated case management fee) and/or to incorporate chronic care disease guidelines into their practices. The HANs identified 11 sites as candidates to be surveyed.

PHPG was able to survey six of the 11 sites. The survey inquired about the type of support the practice had received and its satisfaction both with the specific activities performed and with HAN support in general.  Appendix 7 includes a copy of the survey.

Although a structured survey instrument was used, the findings should be considered qualitative due to the sample selection method and size.

### *Findings* – HAN Care Managed Population – Nature of Support Activities

Respondents reported receiving support with patient care management, quality assurance and adoption of telehealth/telemedicine (multiple responses per member were permitted). No respondents specifically reported being assisted to achieve a higher level of tier support, although OHCA quality assurance audits are a component of maintaining or raising a provider's tier level (Exhibit F-132).

Exhibit F-132 - HAN - PCMH Providers Practice - Areas of Support

| Area of Support | Value |
|---|---|
| Referrals for SDOH assistance | 2 |
| Care management of complex patients | 2 |
| OHCA quality assurance audits | 2 |
| Referrals for ancillary care | 3 |
| Evidence-based chronic care guidelines | 3 |
| Telehealth/telemedicine | 4 |
| Management of frequent ER users | 5 |
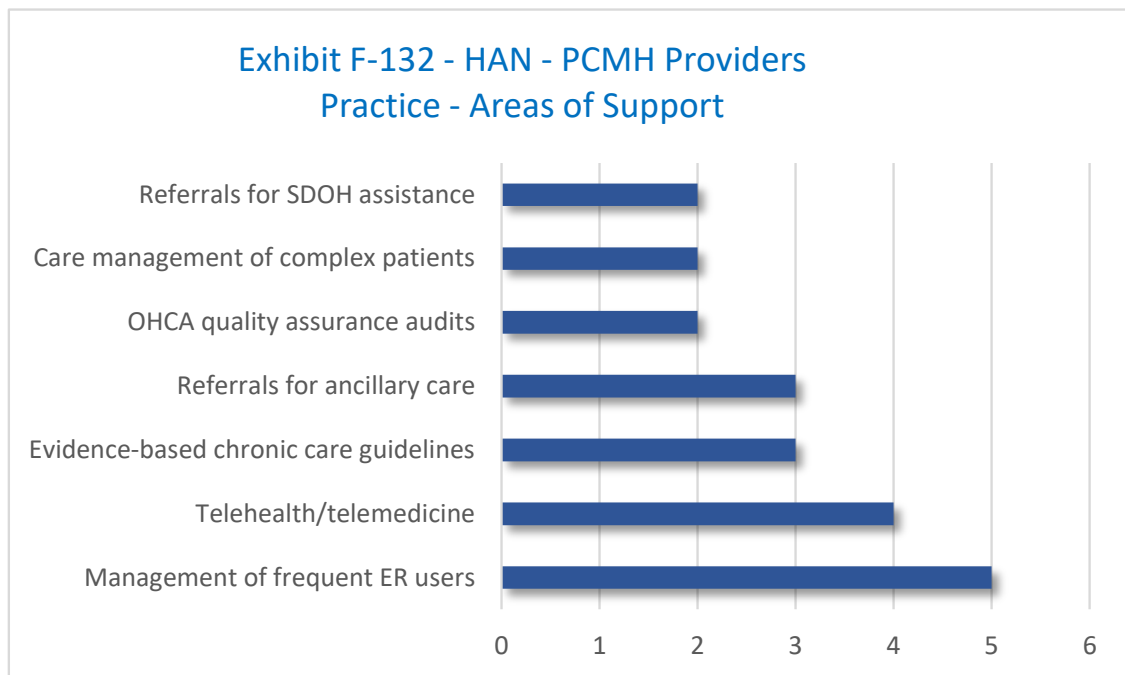
### *Findings* – HAN Care Managed Population – PCMH Provider Satisfaction

Five of the six respondents reported being very satisfied both with the specific support activities and the HAN's overall level of support. One respondent reported being somewhat satisfied in both areas. No respondents reported being dissatisfied.

## HAN Quality of Care – Summary

The SoonerCare HAN total and comparison group populations differed by a statistically significant amount on nine of 17 HEDIS or HEDIS-like quality-of-care measures, with the HAN total population outperforming the comparison group on four measures and the comparison group outperforming the HAN total population on five. All of but two of the measures trended downward from 2019 to 2021.

The SoonerCare HAN Care Managed member and comparison group populations differed by a statistically significant amount on four of 13 HEDIS measures, with the SoonerCare HAN Care Managed population outperforming the comparison group on all four measures.  Five of the measures trended upward from 2019 to 2021; the remaining eight trended downward.

The SoonerCare HAN total and comparison group populations differed by a statistically significant amount on two of six CAHPS measures, with the SoonerCare HAN population outperforming the comparison group on both measures (Exhibit F-133).  (See bottom of exhibit for legend.)

*Exhibit F-133 – HAN Quality of Care Measures – Summary*

| Measures | HAN Total versus Comparison Group | HAN Total 2019 – 2021 Trend | HAN Care Managed versus Comparison Group | HAN Care Managed 2019 – 2021 Trend |
|---|---|---|---|---|
| **Number of HAN beneficiaries engaged in care management** | | | | ▲ |
| **Asthma – Medication Ratio – Ages 5 to 18** | ✦ (red) | ▲ | ✦ | ▲ |
| **Asthma – Medication Ratio – Ages 19 to 64** | ✦ (red) | ▲ | ✦ | ▲ |
| **Cardiovascular – Persistence of Beta Blocker Treatment after a Heart Attack** | ✦ (red) | ▼ | ✦ | ▼ |
| **Cardiovascular –   LDL-C Test** | ✦ | ▼ | ✦ | ▼ |
| **COPD – Use of Spirometry Testing** | ✦ | ▼ | ✦ | ▼ |
| **COPD – Pharmacotherapy Management of COPD Exacerbation – 14 Days** | ✦ (red) | ▼ | ✦ | ▲ |

| Measures | HAN Total versus Comparison Group | HAN Total 2019 – 2021 Trend | HAN Care Managed versus Comparison Group | HAN Care Managed 2019 – 2021 Trend |
|---|---|---|---|---|
| COPD – Pharmacotherapy Management of COPD Exacerbation – 30 Days | ✦ (gray) | ▼ (red) | ✦ (gray) | ▼ (red) |
| Diabetes – Percentage of Members who had LDL-C Test | ✦ (blue) | ▼ (red) | ✦ (blue) | ▼ (red) |
| Diabetes – Percentage of Members who had Retinal Eye Exam Performed | ✦ (blue) | ▼ (red) | ✦ (blue) | ▼ (red) |
| Diabetes – Percentage of Members who had HbA1c Testing | ✦ (blue) | ▼ (red) | ✦ (blue) | ▼ (red) |
| Diabetes – Percentage who Received Medical Attention for Nephropathy | ✦ (blue) | ▼ (red) | ✦ (blue) | ▲ (blue) |
| Hypertension – Percentage of Members who had LDL-C Test | ✦ (gray) | ▼ (red) | ✦ (gray) | ▼ (red) |
| Hypertension – Percentage of Members Prescribed ACE/ARB Therapy | ✦ (red) | ▼ (red) | ✦ (gray) | ▼ (red) |
| Mental Health – Follow-up after Hospitalization – 7 Days – Ages 6 to 20 | ✦ (gray) | ▼ (red) | | |
| Mental Health – Follow-up after Hospitalization – 7 Days – Ages 21 and Older | ✦ (gray) | ▼ (red) | | |
| Mental Health – Follow-up after Hospitalization – 30 Days – Ages 6 to 20 | ✦ (gray) | ▼ (red) | | |
| Mental Health – Follow-up after Hospitalization – 30 Days – Ages 21 and Older | ✦ (gray) | ▼ (red) | | |
| SDOH Assistance | *Qualitative Measure* | | | |
| Rating of Health Care – Adults | ✦ (gray) | | | |

| Measures | HAN Total versus Comparison Group | HAN Total 2019 – 2021 Trend | HAN Care Managed versus Comparison Group | HAN Care Managed 2019 – 2021 Trend |
|---|---|---|---|---|
| Rating of Health Care – Children | ✦ | | | |
| Rating of Health Plan – Adults | ✦ | | | |
| Rating of Health Plan – Children | ✦ | | | |
| Rating of Personal Doctor – Adults | ✦ | | | |
| Rating of Personal Doctor - Children | ✦ | | | |
| PCMH accreditation – members by tier | | *Qualitative Measure* | | |
| PCMH Provider satisfaction – practice support activities | | *Qualitative Measure* | | |
| PCMH provider satisfaction – chronic disease guidelines | | *Qualitative Measure* | | |

✦　HAN exceeds comparison group by a statistically significant amount (3-year pooled)

✦　No statistically significant difference (3-year pooled)

✦　 Comparison group exceeds HAN by a statistically significant amount (3-year pooled)

▲　2019 – 2021 trend is upward

▼　2019 – 2021 trend is downward
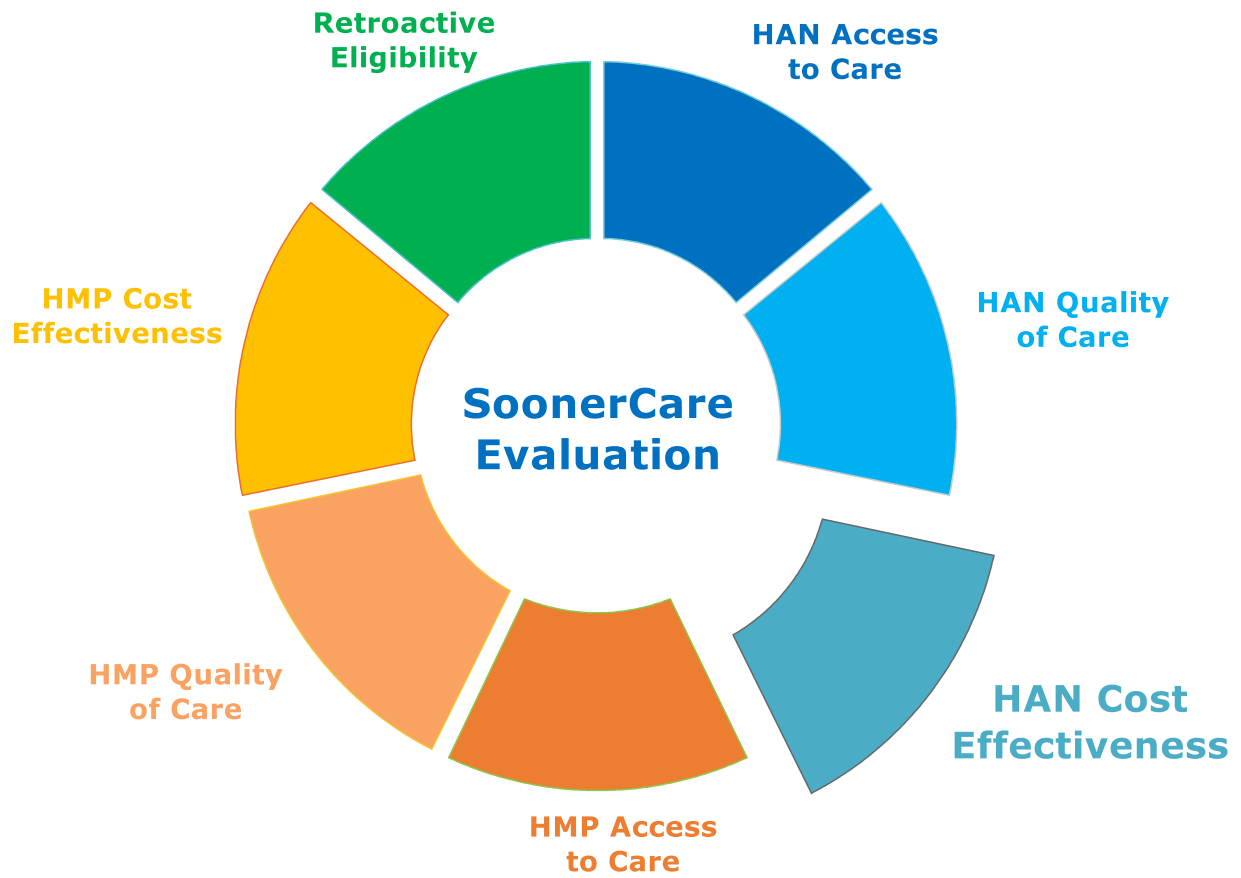
## 3. *HAN Cost Effectiveness*

### Overview

HAN activities related to improving access and quality, if effective, should have an observable impact on beneficiary service utilization and expenditures. Improvement in quality of care should yield better outcomes in the form of fewer emergency room visits and hospitalizations, and lower acute care costs.

### HAN Cost Effectiveness Measures

Exhibit F-134 presents the HAN cost effectiveness measures and identifies:

- Data sources
- Subgroups evaluated (if any)
- Presence or absence of a national benchmark
- Presence or absence of comparative data from the prior Demonstration period

### Supporting Appendices

Appendix 2 contains CEM covariate balance tables for utilization and expenditure measures. Appendix 3 contains statistical significance test results for utilization and expenditure measures.

*Exhibit F-134 - HAN Cost Effectiveness Measures - Overview*

| Measures | Source | HAN Care Managed Subgroup | Geographic Subgroups | National Benchmark | Prior Period Data |
|---|---|---|---|---|---|
| **Emergency Room Utilization** Emergency room visits per 1,000 member months. | MMIS (claims) | *Yes* | *Yes* | No | *Yes* |
| **Hospital Admissions** Acute care hospital admissions per 100,000 member months. | MMIS (claims) | *Yes* | *Yes* | No | *Yes* |
| **PMPM Expenditures** Average per member per month expenditures (all services). | MMIS (claims) | *Yes* | *Yes* | No | *Yes* |

Methodology detail and sample sizes also are included at the bottom of exhibits containing the results of statistical significance tests between treatment (Demonstration) and comparison group populations.

## Emergency Room Visits per 1,000 Member Months

*Findings* – HAN Total Population

HAN total and comparison group members each averaged approximately 44 emergency room visits per 1,000 member months across the three years (Exhibit F-135). The visit rate for both populations declined from 2019 to 2020 and rose again from 2020 to 2021.



Exhibit F-135 - HAN - Total
Emergency Room Visits per 1,000 Member Months
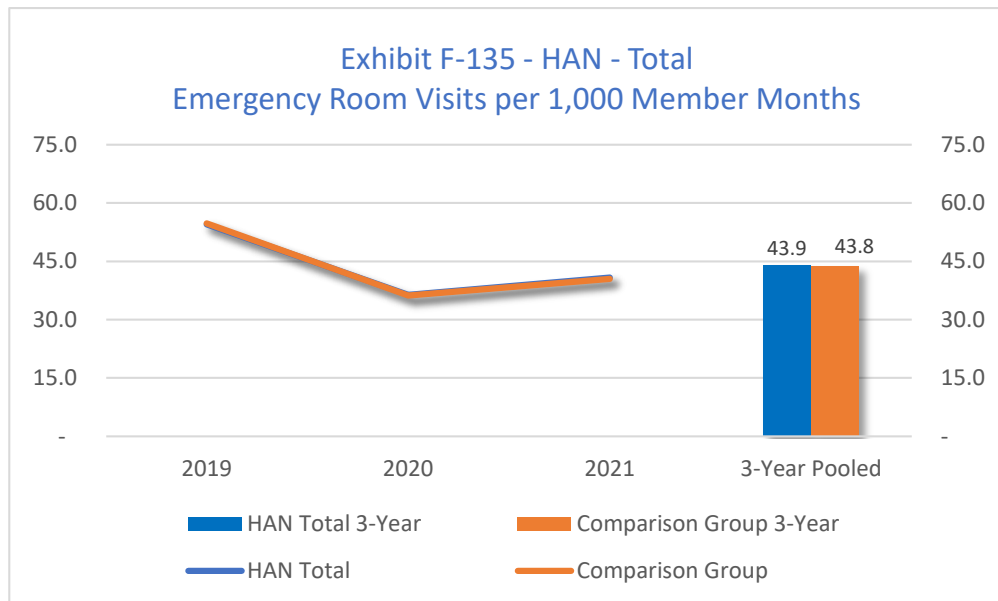
Note: Lower rate is better

The difference between the HAN total and comparison group compliance rates was statistically significant in each of the individual years. It was not statistically significant for the three-year pooled data (Exhibit F-136)[58].

| Exhibit F-136 – HAN (Total) – Emergency Room Visits per 1,000 Member Months | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 54.5 | 36.4 | 40.8 | 43.9 |
| Comparison Group | 54.8 | 36.2 | 40.5 | 43.8 |
| Difference | (0.3) ‡ | 0.2‡ | 0.3‡ | 0.1 |
| ‡  HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 93,543 CG – 129,535 | HAN-T – 108,548 CG – 162,413 | HAN-T – 127,036 CG – 197,225 | HAN-T – 329,127 CG – 489,173 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

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[58] The finding of statistical significance for the individual years, despite the small absolute difference, is an artifact of the large population sizes for both groups. The three-year pooled rate (which did not reach significance), when taken to the third decimal place, was nearly identical, at 43.895 for the HAN total population and 43.833 for the comparison group.

*Findings* – HAN Care Managed Population

HAN Care Managed members averaged approximately 134 emergency room visits per 1,000 member months and comparison group members averaged 100 visits per 1,000 member months across the three years (Exhibit F-137). The visit rate for both populations declined from 2019 to 2020 and rose again from 2020 to 2021.



Exhibit F-137 - HAN - Care Managed
Emergency Room Visits per 1,000 Member Months

Note: Lower rate is better

The difference between the HAN Care Managed and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-138).

| Exhibit F-138 – HAN (Care Managed) – Emergency Room Visits per 1,000 Member Months | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Care Managed) | 161.8 | 114.3 | 124.4 | 133.5 |
| Comparison Group | 124.0 | 84.8 | 91.1 | 100.0 |
| Difference | 37.8 ‡ | 29.5‡ | 33.3‡ | 33.5‡ |
| ‡ HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-CM – 1,394 CG – 10,951 | HAN-CM – 1,744 CG – 10,502 | HAN-CM – 2,288 CG – 16,150 | HAN-CM – 5,426 CG –37,603 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total urban and rural subgroups recorded similar compliance rates; both trended subgroups downward from 2019 to 2020 and rose again from 2020 to 2021.

The HAN Care Managed rural subgroup recorded a higher rate than the urban subgroup in 2019 and 2020; the rates were nearly equal in 2021. Both subgroups trended downward from 2019 to 2020 and rose again from 2020 to 2021 (Exhibit F-139).



Exhibit F-139 - HAN Urban/Rural Subgroups
Emergency Room Visits per 1,000 Member Months
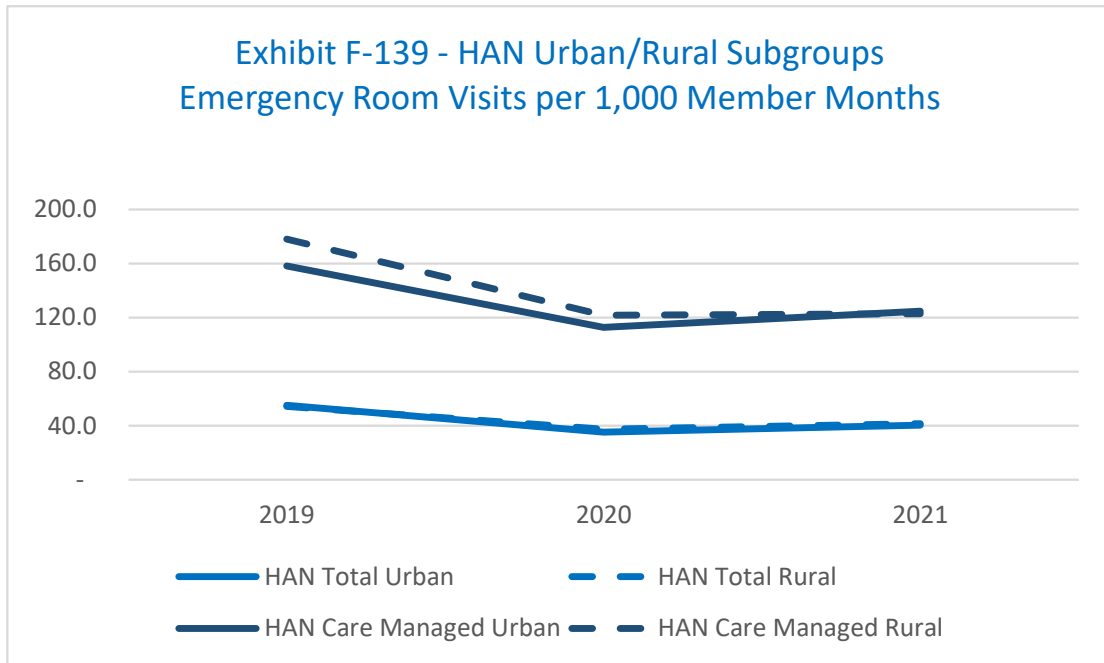
| | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 55.0 | 35.3 | 40.5 |
| | **Rural** | 54.3 | 37.4 | 41.5 |
| HAN (Care Managed) | **Urban** | 158.2 | 112.9 | 124.9 |
| | **Rural** | 178.1 | 121.8 | 123.0 |

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HAN total population in the prior waiver period (2016 to 2018). The emergency room visit rate declined gradually from approximately 62 visits per 1,000 member months in 2016 to 36 visits per 1,000 member months in 2020, before rising partially again to 41 visits per 1,000 member months in 2021 (Exhibit F-140).



Exhibit F-140 - HAN - Total - Prior and Current Periods Emergency Room Visits per 1,000 Member Months
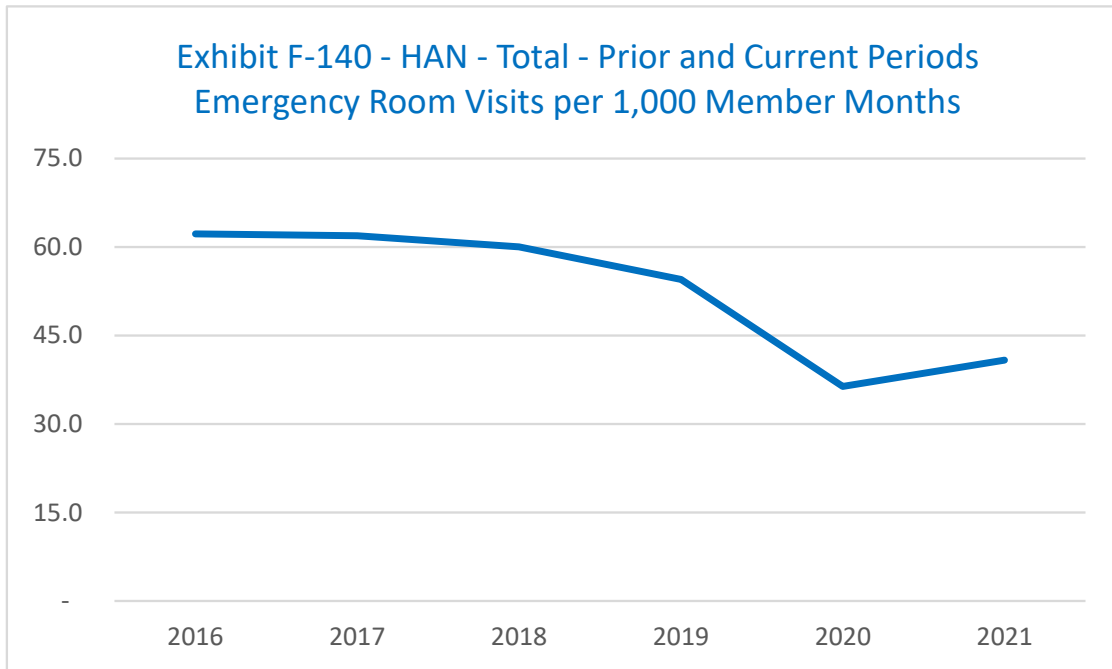
|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| HAN (Total) | 62.2 | 61.9 | 60.0 | 54.5 | 36.4 | 40.8 |

## Hospital Admissions per 100,000 Member Months

### *Findings* – HAN Total Population

HAN total members averaged approximately 660 hospital admissions per 100,000 member months and comparison group members 530 admissions per 100,000 member months across the three years (Exhibit F-141). The admission rate for both populations declined from 2019 to 2020; it remained approximately unchanged from 2020 to 2021 for the HAN total population and declined further for the comparison group population.
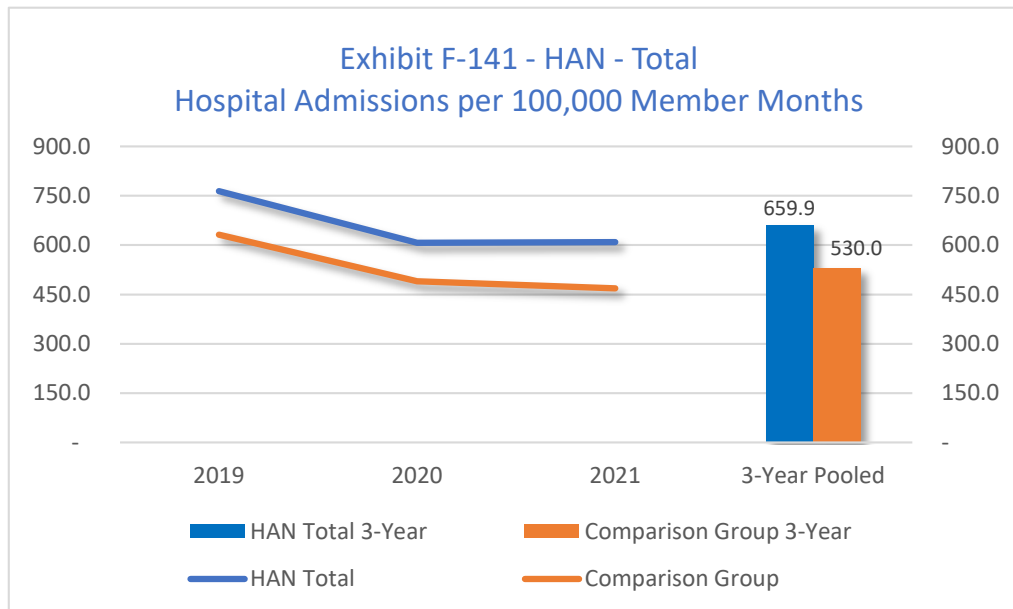


Exhibit F-141 - HAN - Total
Hospital Admissions per 100,000 Member Months

Note: Lower rate is better

The difference between the HAN total and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-142).

| Exhibit F-142 – HAN (Total) – Hospital Admissions per 100,000 Member Months | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | 764.4 | 606.6 | 608.8 | 659.9 |
| Comparison Group | 632.0 | 489.8 | 468.1 | 530.0 |
| Difference | 132.4 ‡ | 116.8‡ | 140.7‡ | 129.9‡ |
| ‡   HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 93,543 CG – 129,535 | HAN-T – 108,548 CG – 162,413 | HAN-T – 127,036 CG – 197,225 | HAN-T – 329,127 CG – 489,173 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

## Findings – HAN Care Managed Population

HAN Care Managed members averaged approximately 2,668 hospital admissions per 100,000 member months and comparison group members averaged approximately 2,729 admissions per 100,000 member months across the three years (Exhibit F-143). The admission rate for both populations declined from 2019 to 2020 and rose again from 2020 to 2021.



Exhibit F-143 - HAN - Care Managed
Hospital Admissions per 100,000 Member Months

Note: Lower rate is better

The difference between the HAN Care Managed and comparison group compliance rates was not statistically significant in any of the individual years. It also was not statistically significant for the three-year pooled data (Exhibit F-144) .

| Exhibit F-144 – HAN (Care Managed) – Hospital Admissions per 100,000 Member Months | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Care Managed) | 3,431.4 | 2,260.1 | 2,312.8 | 2,668.1 |
| Comparison Group | 3,515.0 | 2,182.8 | 2,488.2 | 2,728.7 |
| Difference | (83.6) | 77.3 | (175.4) | (60.6) |
| ‡ HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-CM – 1,394 CG – 10,951 | HAN-CM – 1,744 CG – 10,502 | HAN-CM – 2,288 CG – 16,150 | HAN-CM – 5,426 CG –37,603 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total urban subgroup recorded a higher rate than the rural subgroup in 2019 and a lower rate in 2020; the 2021 rates were nearly equal. The urban subgroup trended downward from 2019 to 2020 and rose again from 2020 to 2021; the rural subgroup trended downward from 2019 to 2021.

The HAN Care Managed urban subgroup recorded a lower rate in 2019 and 2021 and a higher rate in 2020. The urban subgroup trended downward from 2019 to 2020 and was approximately flat from 2020 to 2021. The rural subgroup also trended downward from 2019 to 2020 and rose again from 2020 to 2021 (Exhibit F-145).



Exhibit F-145 - HAN Urban/Rural Subgroups
Hospital Admissions per 100,000 Member Months
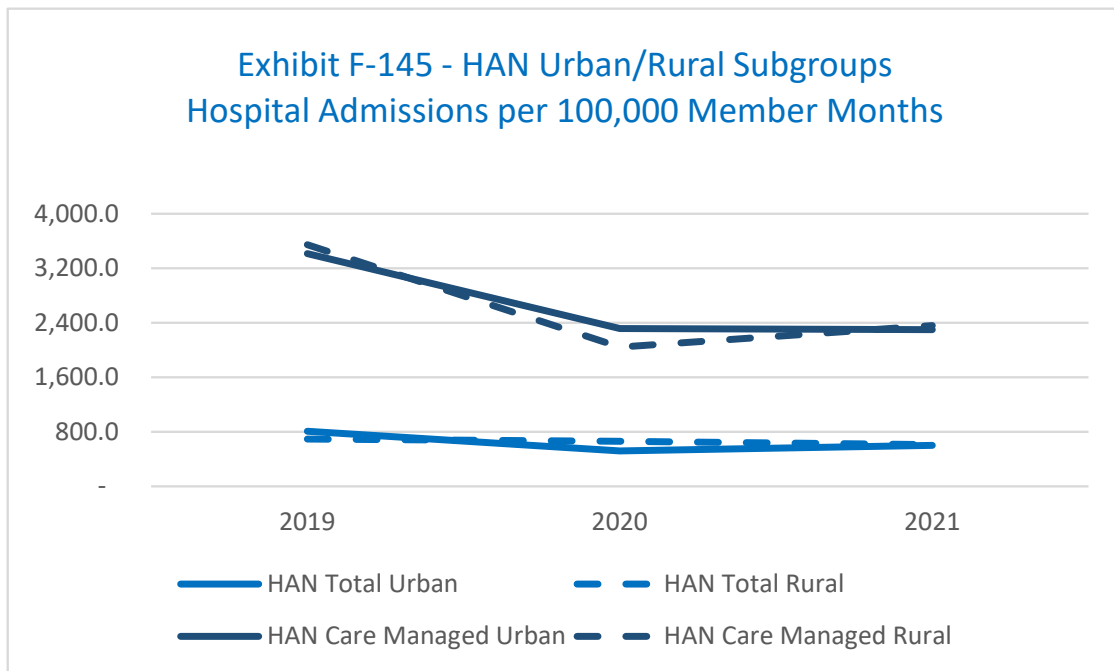
|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | 809.2 | 518.0 | 602.0 |
|  | **Rural** | 694.4 | 633.3 | 613.1 |
| HAN (Care Managed) | **Urban** | 3,416.5 | 2,317.4 | 2,297.8 |
|  | **Rural** | 3,548.8 | 2,043.0 | 2,357.8 |

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HAN total population in the prior waiver period (2016 to 2018). The hospital admission rate rose from approximately 733 admissions per 100,000 member months in 2016 to 811 admissions per 100,000 member months in 2018, before declining to 609 admissions per 100,000 member months in 2021 (Exhibit F-146).

**Exhibit F-146 - HAN - Total - Prior and Current Periods Hospital Admissions per 100,000 Member Months**
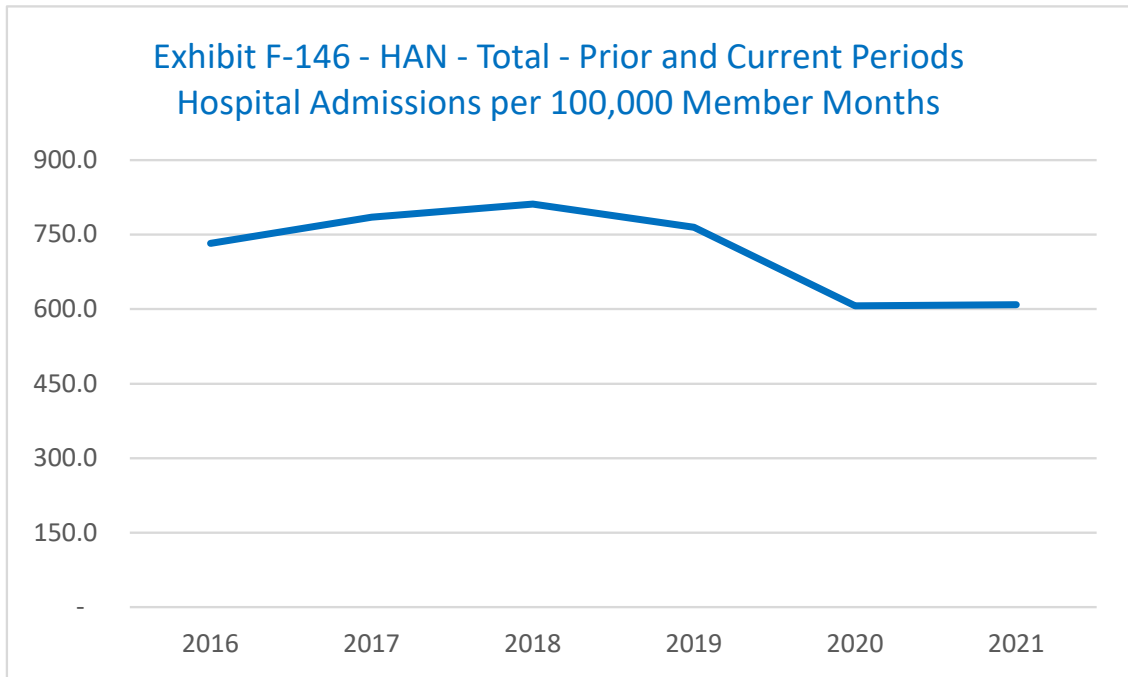


|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| HAN (Total) | 732.6 | 785.0 | 811.2 | 764.4 | 606.6 | 608.8 |

## Per Member Per Month (PMPM) Expenditures

*Findings* – HAN Total Population

HAN total member expenditures averaged approximately $201 PMPM and comparison group member expenditures averaged approximately $195 PMPM across the three years (Exhibit F-147). Average expenditures for both populations declined from 2019 to 2020 and rose again from 2020 to 2021.



Exhibit F-147 - HAN - Total PMPM Expenditures

Note: Lower rate is better

The difference between the HAN total and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-148)[59].

| Exhibit F-148 – HAN (Total) – PMPM Expenditures | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Total) | $213.32 | $187.94 | $202.83 | $201.36 |
| Comparison Group | $201.62 | $182.75 | $200.60 | $194.99 |
| Difference | $11.70‡ | $5.19‡ | $2.23‡ | $6.37‡ |
| ‡ HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-T – 93,543 CG – 129,535 | HAN-T – 108,548 CG – 162,413 | HAN-T – 127,036 CG – 197,225 | HAN-T – 329,127 CG – 489,173 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

[59] The finding of statistical significance despite the small absolute difference is an artifact of the large population sizes for both groups.

*Findings* – HAN Care Managed Population

HAN Care Managed member expenditures averaged approximately $627 PMPM and comparison group member expenditures averaged approximately $692 PMPM across the three years (Exhibit F-149). Average expenditures for the HAN Care Managed population declined from 2019 to 2021. Average expenditures for the comparison group declined from 2019 to 2020 and rose again from 2020 to 2021.



Note: Lower rate is better

The difference between the HAN Care Managed and comparison group compliance rates was statistically significant in 2021. It also was statistically significant for the three-year pooled data (Exhibit F-150).

| Exhibit F-150 – HAN (Care Managed) – PMPM Expenditures | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HAN (Care Managed) | $680.44 | $620.76 | $579.62 | $626.94 |
| Comparison Group | $697.17 | $653.91 | $726.29 | $692.46 |
| Difference | ($16.73) | ($33.15) | ($146.67)‡ | ($65.52)‡ |
| ‡ HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HAN-CM – 1,394 CG – 10,951 | HAN-CM – 1,744 CG – 10,502 | HAN-CM – 2,288 CG – 16,150 | HAN-CM – 5,426 CG –37,603 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HAN Total and Care Managed Populations – Urban and Rural Subgroups

The HAN total rural subgroup recorded a higher rate than the urban subgroup across the three years. Both subgroups trended downward from 2019 to 2020 and rose again from 2020 to 2021.

The HAN Care Managed rural subgroup also recorded a higher rate than the urban subgroup across the three years. The urban subgroup trended downward from 2019 to 2021; the rural subgroup rose from 2019 to 2020 and declined from 2020 to 2021 (Exhibit F-151).



Exhibit F-151 - HAN Urban/Rural Subgroups PMPM Expenditures
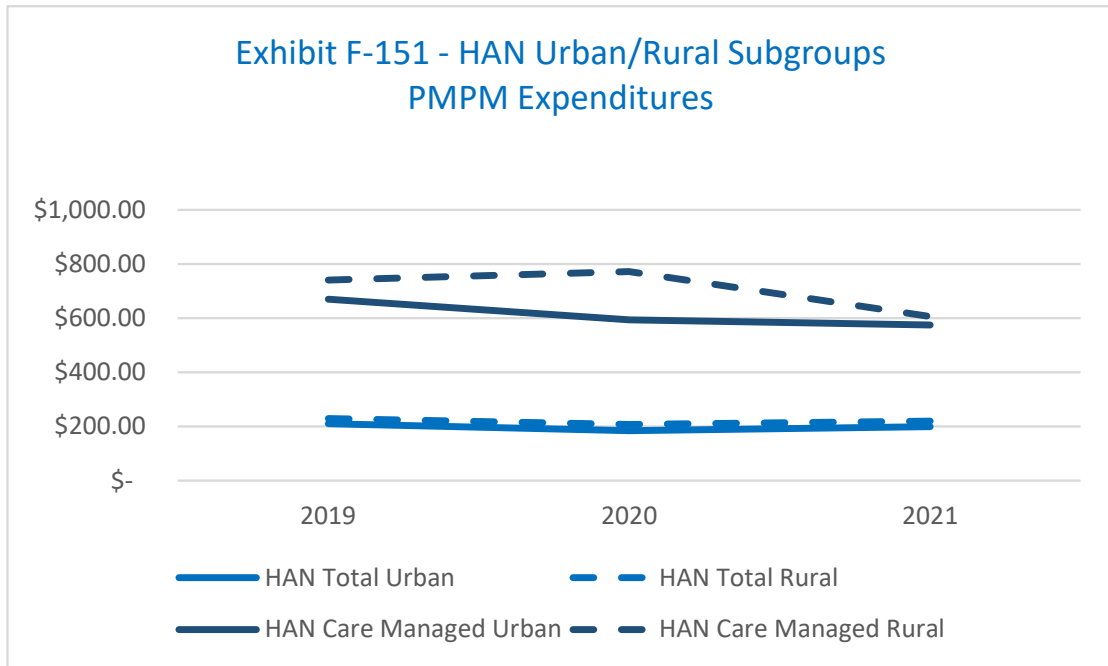
|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| HAN (Total) | **Urban** | $210.55 | $184.43 | $199.67 |
|  | **Rural** | $229.01 | $207.81 | $219.96 |
| HAN (Care Managed) | **Urban** | $669.77 | $594.03 | $574.87 |
|  | **Rural** | $740.90 | $772.21 | $606.53 |

*Findings* – HAN Total Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HAN total population in the prior waiver period (2016 to 2018).  Average PMPM expenditures rose from approximately $217 PMPM in 2016 to $227 PMPM in 2018, before declining to $188 PMPM in 2020 (first year of Public Health Emergency) and rising partially again to $203 PMPM in 2021 (Exhibit F-152).

**Exhibit F-152 - HAN - Total - Prior and Current Periods PMPM Expenditures**
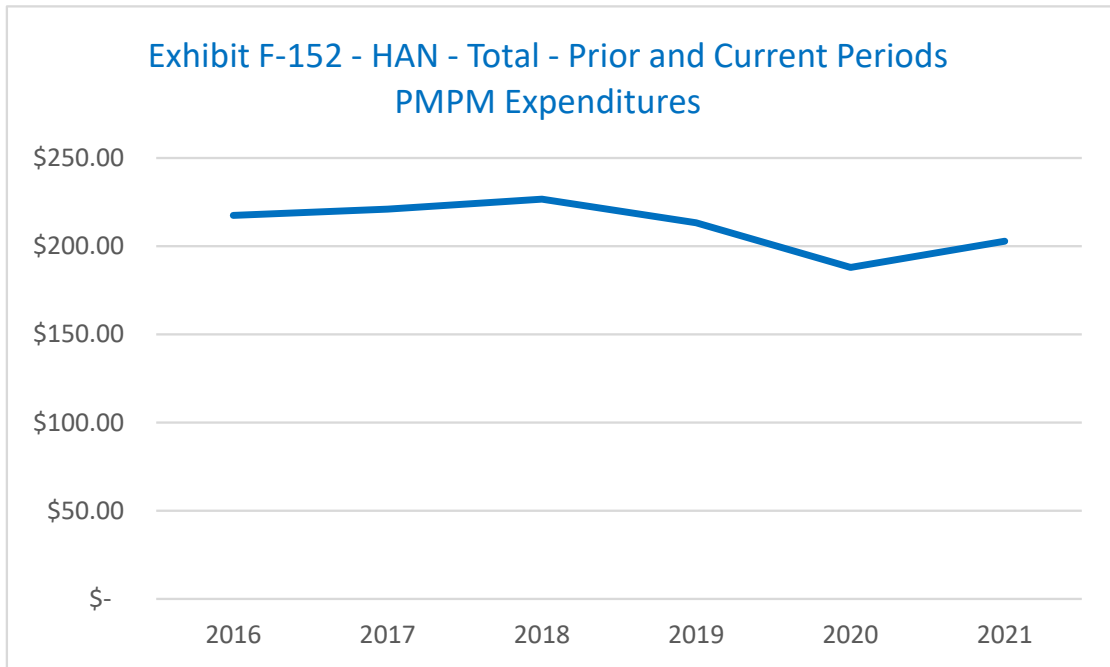


|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| HAN (Total) | $217.33 | $220.97 | $226.69 | $213.32 | $187.94 | $202.83 |

## HAN Cost Effectiveness – Summary

The SoonerCare HAN total and comparison group populations differed by a statistically significant amount on two of the three cost effectiveness measures, with the comparison group outperforming the HAN total population. All three of the measures trended downward from 2019 to 2021 (lower rate is better).

The SoonerCare HAN Care Managed member and comparison group populations also differed by a statistically significant amount on two of the three cost effectiveness measures, with each outperforming the other on one measure apiece. All three of the measures again trended downward from 2019 to 2021 (Exhibit F-153).

*Exhibit F-153 – HAN Cost Effectiveness – Summary*

| Measures | HAN Total versus Comparison Group | HAN Total 2019 – 2021 Trend | HAN Care Managed versus Comparison Group | HAN Care Managed 2019 – 2021 Trend |
|---|---|---|---|---|
| **Emergency Room Visits per 1,000 Member Months** | ✦ (gray) | ▼ | ✦ (red) | ▼ |
| **Hospital Admissions per 100,000 Member Months** | ✦ (red) | ▼ | ✦ (gray) | ▼ |
| **PMPM Expenditures** | ✦ (red) | ▼ | ✦ (blue) | ▼ |

✦ (blue)  HAN exceeds comparison group by a statistically significant amount (3-year pooled)

✦ (gray)  No statistically significant difference (3-year pooled)

✦ (red)   Comparison group exceeds HAN by a statistically significant amount (3-year pooled)

▲  2019 - 2021 trend is upward (higher trend is worse)

▼  2019 – 2021 trend is downward (lower trend is better)

## 4. *HMP Access to Care*

### Overview

The OHCA contracted with the SoonerCare HMP vendor (Telligen) to offer practice facilitation in holistic chronic care management to participating providers. The OHCA also required its vendor to assess and identify beneficiaries with, or at risk for chronic conditions who would benefit from holistic care management.  (Beneficiaries aligned with an HMP-participating practice.)

The OHCA established a target number of beneficiaries to be care managed during a contract year and specified that the majority of care management was to occur at the PCMH office. This was to improve the frequency of beneficiary interactions with the care manager and PCMH, and associated access to care.

### HMP Access to Care Measures

Exhibit F-154 on the following page presents the HMP access to care measures and identifies:

- Data sources
- Subgroups evaluated (if any)
- Presence or absence of a national benchmark
- Presence or absence of comparative data from the prior Demonstration period[60]

### Supporting Appendices

Appendix 8 contains CEM covariate balance tables for CAHPS measures. Appendix 9 contains statistical significance tests results for CAHPS measures.

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[60] The approved evaluation design included an Interrupted Time Series (ITS) analysis for a subset of HMP access, quality and cost measures, using the 2016 – 2018 time period as baseline. PHPG concluded that the ITS could not be performed for the interim evaluation due to insufficient data points and the disruptive effects of the COVID-19 PHE on the HMP vendor's implementation of enhanced coaching modalities. The efficacy of the ITS analysis will be reconsidered for the summative evaluation.

*Exhibit F-154 - HMP Access to Care Measures - Overview*

| Measures | Source | Geographic Subgroups | National Benchmark | Prior Period Data |
|---|---|---|---|---|
| **Number of HAN beneficiaries engaged in care management**<br>Number of HAN members engaged in care management at any point during the measurement year. | OHCA | No | No | No |
| **Children and adolescents' access to PCPs – 12 months to 19 years**<br>Percentage of beneficiaries 12 months to 19 years of age who had a visit with a PCP during the measurement year. | HEDIS | ***Yes*** | No | ***Yes*** |
| **Adults' access to preventive/ambulatory health services**<br> Percentage of beneficiaries 20 years of age and older who had an ambulatory or preventive care visit in the measurement year. | HEDIS | ***Yes*** | No | No |

Methodology detail and sample sizes also are included at the bottom of exhibits containing the results of statistical significance tests between treatment (Demonstration) and comparison group populations.

## Number of HMP Members Engaged in Health Coaching

*Findings*

Telligen proposed to serve 6,000 beneficiaries each year under the contract that took effect in 2019. Telligen provided health coaching to 4,864 unduplicated beneficiaries in 2019, 7,152 in 2020 and 6,292 in 2021[61]. Although these are not point-in-time caseloads, average tenure each year was close to 12 months (Exhibit F-155).



Exhibit F-155 - Health Managment Program Members Engaged in Health Coaching
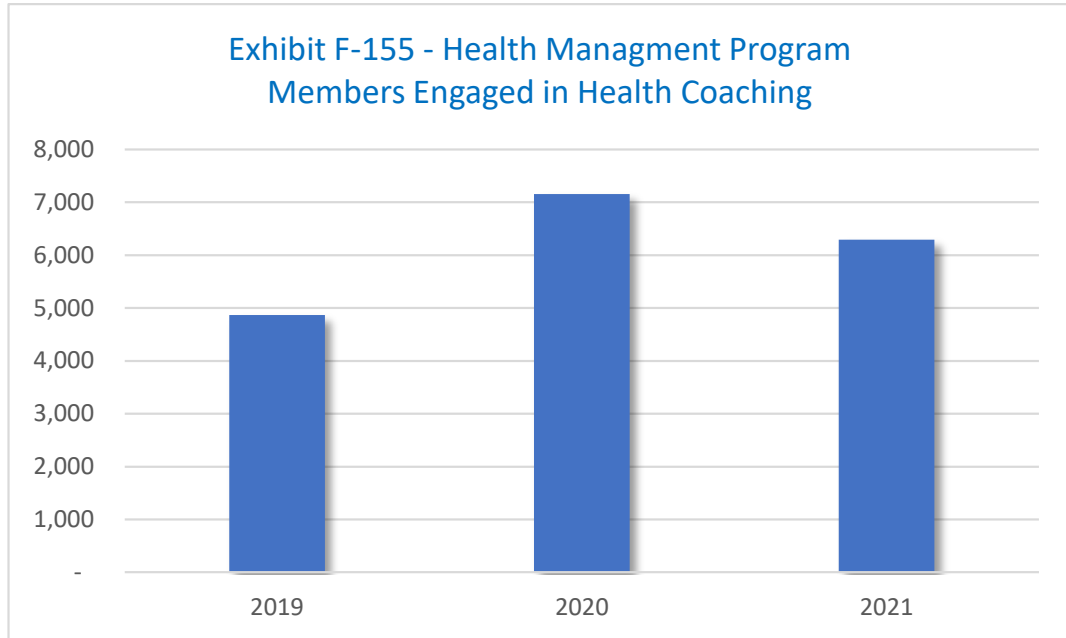
Hypertension and diabetes were the most common of the major chronic diagnoses across the three years, although approximately 35 percent of members had none of the five conditions (Exhibit F-156).

| Exhibit F-156 – HMP – Health Coaching Diagnoses (Percent of Total)[62] | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Average |
| Asthma | 5.6% | 5.4% | 6.2% | 5.7% |
| CAD | 12.7% | 8.7% | 9.2% | 10.0% |
| COPD | 11.8% | 8.5% | 9.5% | 9.6% |
| Diabetes | 36.6% | 31.8% | 32.7% | 33.4% |
| Hypertension | 53.5% | 49.4% | 45.4% | 49.1% |
| Other | 28.1% | 36.8% | 37.7% | 34.8% |

[61] The lower enrollment in 2019 was at least partially due to Telligen's decision not to automatically re-enroll all members at the time of the new contract. Telligen took several months to re-assess the health coaching population and to enroll new participants in place of those found no longer to need assistance.
[62] Beneficiaries can be in multiple categories; "other" includes those not appearing in any of the defined categories.

## Children and Adolescents' Access to PCPs – 12 Months to 19 Years

*Findings* – HMP Population

Approximately 98 percent of HMP members and 89 percent of comparison group members were compliant on this measure across the three years (Exhibit F-157). The compliance rate for the HMP population was stable from 2019 to 2021 while the comparison group rate declined.



Exhibit F-157 - HMP
Children's and Adolescents' Access to PCP
12 Months to 19 Years of Age

The difference between the HMP and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-158).

| Exhibit F-158 – HMP – Children's & Adolescents' Access to PCP – 12 Months to 19 Years | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 98.3% | 99.2% | 98.0% | 98.5% |
| Comparison Group | 93.5% | 90.5% | 83.4% | 89.1% |
| Difference | 4.8%‡ | 8.7%‡ | 14.6%‡ | 9.4%‡ |
| ‡   HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 286 CG – 139,312 | HMP – 511 CG – 178,929 | HMP –498 CG – 172,006 | HMP – 1,295 CG – 490,247 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP and Care Managed Populations – Urban and Rural Subgroups

The HMP urban and rural subgroups recorded similar compliance rates, with both remaining above 97 percent across the three years (Exhibit F-159).



Exhibit F-159 - HMP Urban/Rural Subgroups
Children's and Adolescents' Access to PCP
12 Months to 19 Years of Age

Note: Y-axis does not begin at 0.

|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Compliance Rate | **Urban** | 97.8% | 99.0% | 97.7% |
|  | **Rural** | 99.1% | 99.5% | 98.5% |

*Findings* – HMP Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HMP population in the prior waiver period (2016 to 2018). The compliance rate consistently remained at 98 percent or higher from 2016 to 2021 (Exhibit F-160).

### Exhibit F-160 - HMP - Total - Prior and Current Periods Children's and Adolescents' Access to PCPs
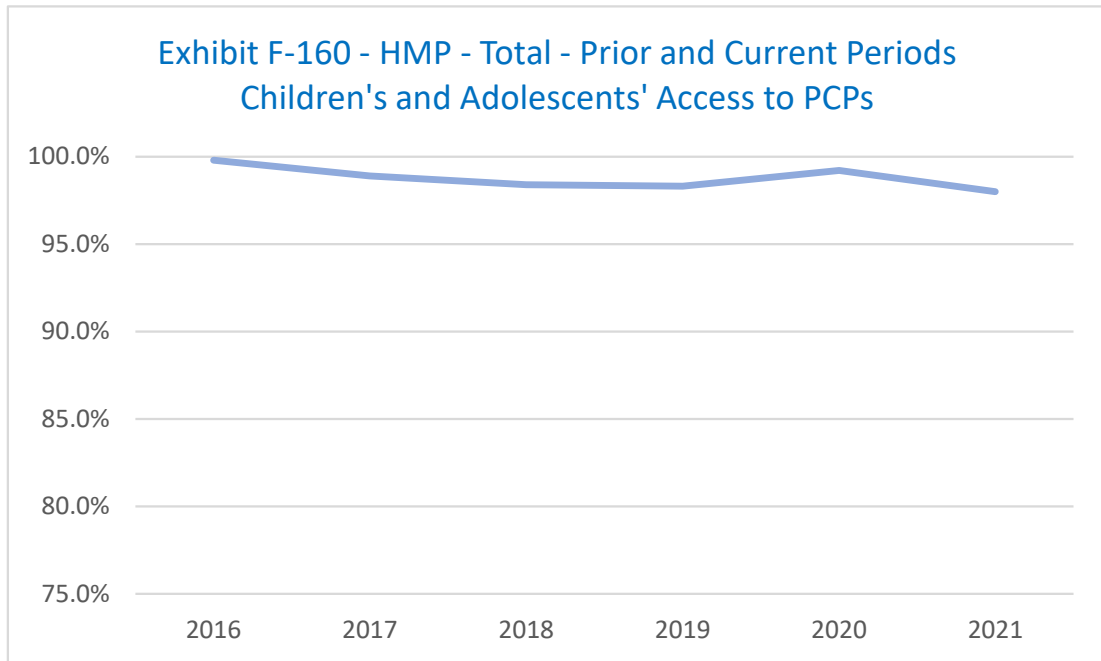


Note: Y-axis does not begin at 0.

|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| Compliance Rate | 99.8% | 98.9% | 98.4% | 98.3% | 99.2% | 98.0% |

## Adults' Access to Preventive/Ambulatory Health Services

*Findings* – HMP Population

Ninety-four percent of HMP members and approximately 85 percent of comparison group members were compliant on this measure across the three years (Exhibit F-161). The compliance rate for the HMP population rose from 2019 to 2021 while the compliance rate for the comparison group declined.



Exhibit F-161 - HMP
Adults' Access to Preventive/Ambulatory Health Services

The difference between the HMP and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-162).

| Exhibit F-162– HMP – Adults' Access to Preventive/Ambulatory Health Services | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 87.4% | 97.2% | 97.5% | 94.0% |
| Comparison Group | 88.7% | 84.5% | 82.1% | 85.1% |
| Difference | (1.3%)‡ | 12.7%‡ | 15.4‡ | 8.9%‡ |
| ‡ HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 4,572 CG – 27,396 | HMP – 6,641 CG – 40,174 | HMP – 5,791 CG – 46,043 | HMP – 17,004 CG – 113,613 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP and Care Managed Populations – Urban and Rural Subgroups

The HMP urban and rural subgroups recorded similar compliance rates; both trended upward from 2019 to 2021. (Exhibit F-163).

**Exhibit F-163 - HMP Urban/Rural Subgroups**
**Adults' Access to Ambulatory/Preventive Health Services**
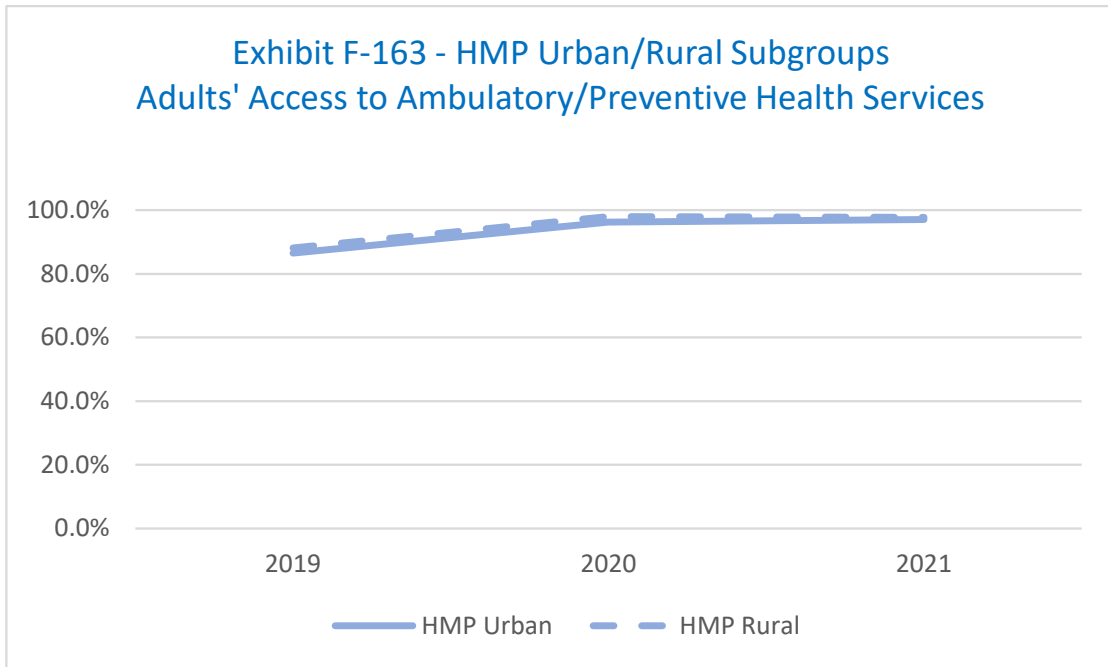


|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Compliance Rate | **Urban** | 86.5% | 96.2% | 97.1% |
|  | **Rural** | 88.1% | 98.0% | 97.8% |

*Findings* – HMP Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HMP population in the prior waiver period (2016 to 2018).  The compliance rate remained above 97 percent in every year except one[63] from 2016 to 2021 (Exhibit F-164).

Exhibit F-164 - HMP - Prior and Current Periods
Adults' Access to Preventive/Ambulatory Health Services

|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| Compliance Rate | 99.9% | 99.5% | 97.8% | 87.0% | 97.2% | 97.5% |

---

[63] 2019 was a transitional year, with a new Telligen contract taking effect in July. Although all members included in the measure met the HEDIS continuous enrollment standard, a larger proportion than in other years were enrolled in the HMP for only part of the year. (See also footnote 61.)

## HMP Access to Care – Summary

The SoonerCare HMP member and comparison group populations differed by a statistically significant amount on the two HEDIS preventive care measures, with the HMP population outperforming the comparison group on both measures. The 2019 to 2021 trend was upward for one measure and downward for the other (Exhibit F-165).

**Exhibit F-165 – HMP Access to Care Measures – Summary**

| Measures | HMP versus Comparison Group | HMP 2019 – 2021 Trend |
|---|---|---|
| **Number of members engaged in health coaching** | | ▲ |
| **Children and adolescents' access to PCPs – 12 months to 19 years** | ✦ | ▼ |
| **Adults' access to preventive/ambulatory health services** | ✦ | ▲ |

✦ HMP exceeds comparison group by a statistically significant amount (3-year pooled)

✦ No statistically significant difference (3-year pooled)

✦  Comparison group exceeds HMP by a statistically significant amount (3-year pooled)

▲ 2019 – 2021 trend is upward

▼ 2019 – 2021 trend is downward
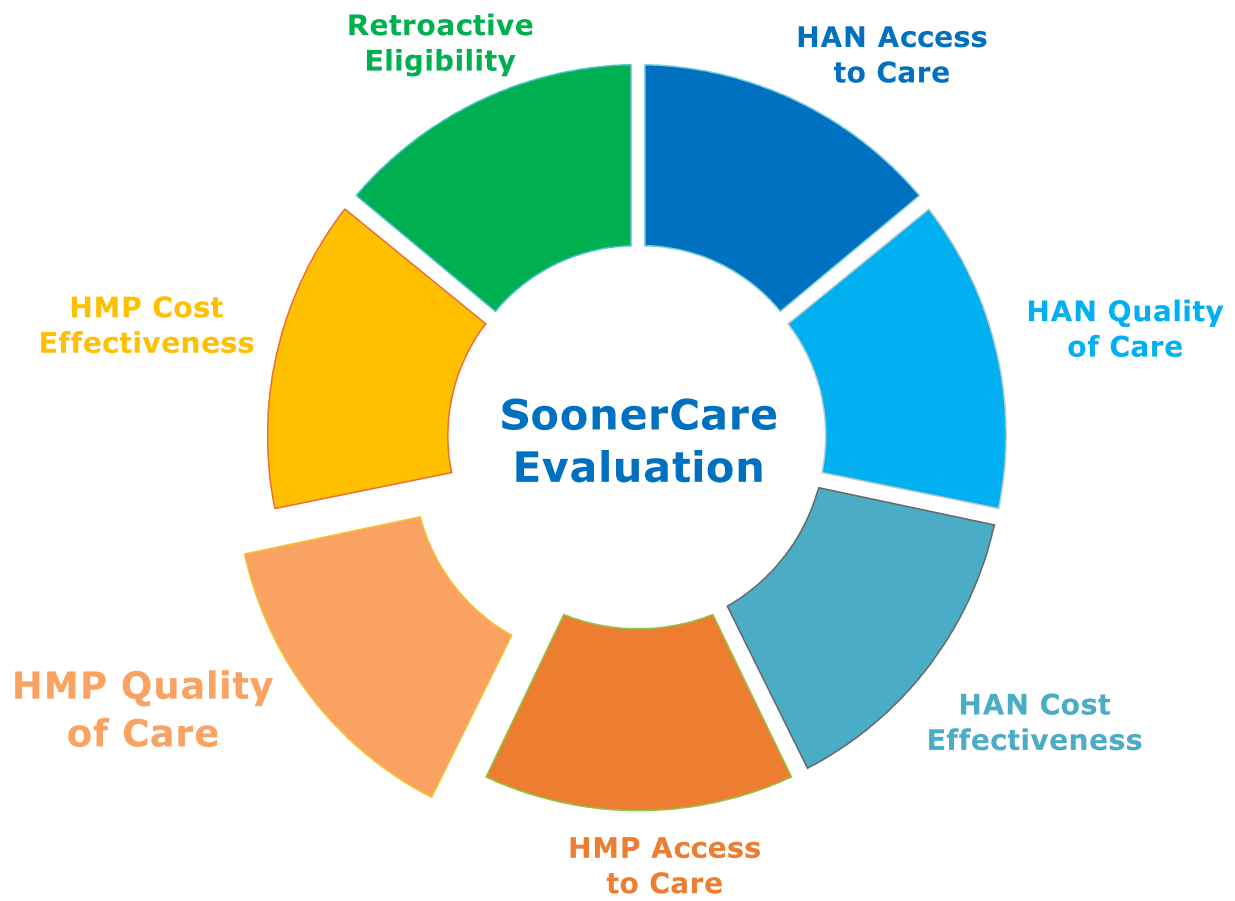
## 5. *HMP Quality of Care*

## Overview

The SoonerCare HMP uses a combination of data analytics and physician referrals to identify appropriate candidates for health coaching. The program targets persons with multiple physical health conditions (often with behavioral health co-morbidities) who can benefit from holistic care management.

Health coaches employ motivational interviewing and other techniques to engage beneficiaries in better managing their chronic health conditions and adopting healthier lifestyles. Health coaches provide education on the importance of preventive care specific to the beneficiary's condition (e.g., retinal eye exams and HbA1c tests for diabetics) and for general good health (e.g., proper diet and exercise). Coaches also assist beneficiaries in communicating with their PCMH provider and scheduling appointments with specialists and behavioral health providers.

Health coaches make themselves available to beneficiaries by telephone, as well as at the physician's office, in the case of practice-embedded coaches. The SoonerCare HMP vendor also operates a telephonic resource center, through which beneficiaries (or their health coaches) can obtain assistance addressing social service needs (social determinants of health) that could present barriers to care (e.g., food or housing insecurity).

## HMP Quality of Care Measures

Exhibit F-166 on the following page presents the HMP quality of care measures and identifies:

- Data sources

- Subgroups evaluated (if any)

- Presence or absence of a national benchmark

- Presence or absence of comparative data from the prior Demonstration period

## Supporting Appendices

Appendix 8 contains CEM covariate balance tables for CAHPS measures. Appendix 9 contains statistical significance tests results for CAHPS measures.  Appendix 10 contains CEM covariate balance tables for HEDIS measures. Appendix 11 contains statistical significance test results for HEDIS measures. Appendix 12 contains the SDOH component of the HMP member targeted survey instrument.

*Exhibit F-166 - Quality of Care Measures - Overview[64]*

| Measures | Source | Geographic Subgroups | National Benchmark | Prior Period Data |
|---|---|---|---|---|
| **Chronic conditions**<br>Average number of physical health chronic conditions among HMP members. | MMIS | No | No | No |
| **Physical/behavioral health co-morbidities**<br>Percentage of members with co-occurring chronic physical health and behavioral health conditions | MMIS | No | No | No |
| **Asthma – Medication Ratio**<br>Percentage of members ages 5 to 18 and 19 to 64 who were identified as having persistent asthma and had a ratio of controller medications to total asthma medication of 0.50 or greater during the measurement year. | HEDIS | *Yes[65]* | *Yes* | *Yes* |
| **Cardiovascular – Persistence of Beta Blocker Treatment after a Heart Attack**<br>Percentage of members 18 years of age and older during the measurement year who were hospitalized and discharged from July 1 of the year prior to the measurement year to June 30 of the measurement year with a diagnosis of AMI and who received persistent beta-blocker treatment for six months after discharge. | HEDIS | *Yes* | No | No |
| **Cardiovascular – Cholesterol Management for Patients with Cardiovascular Conditions – LDL-C Test**<br>Percentage of members 18 to 75 years of age with cardiovascular disease who had an LDL-C test during the measurement year. | HEDIS | *Yes* | No | No |
| **COPD – Use of Spirometry Testing in the Assessment and Diagnosis of COPD**<br>Percentage of members 40 years of age and older with a new diagnosis of COPD or newly active COPD, who received appropriate spirometry testing to confirm the diagnosis. | HEDIS | *Yes* | No | No |

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[64] The approved evaluation design includes follow-up for hospitalization after mental illness, as well as measures for asthma, CAD and diabetes admission rates for treatment of short-term complications. The HMP case count for these measures was determined to be too small to produce reliable findings. The measures will be re-examined for possible inclusion in the summative evaluation report.

[65] 19 – 64 age cohort only. Insufficient case count in 5 – 18 age cohort for reliable results.

| Measures | Source | Geographic Subgroups | National Benchmark | Prior Period Data |
|---|---|---|---|---|
| **COPD – Pharmacotherapy Management of COPD Exacerbation – 14 Days and 30 Days** Percentage of COPD exacerbations for members 40 years of age and older who had an acute inpatient discharge or emergency room visit on or between January 1 to November 30 of the measurement year and who were dispensed a systemic corticosteroid (or there was evidence of an active prescription) within 14 days of the event and within 30 days of the event. | HEDIS | *Yes* | No | No |
| **Diabetes – Percentage of Members who had LDL-C Test** Percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who had LDL-C performed. | HEDIS | *Yes* | No | *Yes* |
| **Diabetes – Percentage of Members who had Retinal Eye Exam Performed** Percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who had retinal eye exam performed. | HEDIS | *Yes* | No | *Yes* |
| **Diabetes - Percentage of Members who had Hemoglobin A1c (HbA1c) Testing** Percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who had Hemoglobin A1c (HbA1c) testing performed. | HEDIS | *Yes* | No | *Yes* |
| **Diabetes - Percentage of Members who Received Medical Attention for Nephropathy** Percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who received medical attention for nephropathy. | HEDIS | *Yes* | No | *Yes* |
| **Hypertension – Percentage of Members who had LDL-C Test** Percentage of members 18 years of age and older with hypertension who had an LDL-C test performed. | HEDIS | *Yes* | No | *Yes* |
| **Hypertension – Percentage of Members Prescribed ACE/ARB Therapy** Percentage of members 18 years of age and older with hypertension who were prescribed angiotensin converting enzyme inhibitors or angiotensin receptor blockers (ACE/ARB therapy). | HEDIS | *Yes* | No | *Yes* |

| Measures | Source | Geographic Subgroups | National Benchmark | Prior Period Data |
|---|---|---|---|---|
| **Opioids – Use of Opioids at High Dosage** Percentage of members without cancer using prescribed opioids at high dosage. | HEDIS | *Yes* | *Yes* | No |
| **Opioids – Concurrent use of Opioids and Benzodiazepines** Percentage of members concurrently using prescribes opioids and benzodiazepines. | HEDIS | *Yes* | *Yes* | No |
| **Rating of Assistance with SDOH** Member awareness of the availability of help with SDOH and satisfaction, among HAN members receiving assistance. | PHPG Targeted Survey | No | No | No |
| **Getting Needed Care – children and adults** Percentage of beneficiaries (adults and parents/caretakers of children) who reported "always" getting needed care. "Getting Needed Care" is a composite measure consisting of two questions, the first of which asks about getting necessary care, tests or treatment[66] and the second of which asks about getting appointments with specialists as soon as needed[67]. The composite is a simple average of the individual measure percentages. | CAHPS | No | *Yes* | No |
| **Rating of Healthcare – Children and Adults[68]** Rating of health care (or child's health care) in the last six months, using a scale from 0 to 10, where "0" represented the worst possible health care and "10" the best possible health care. | CAHPS | No | *Yes* | No |
| **Rating of Health Plan – Children and Adults** Rating of health plan (or child's health plan) in the last six months, using a scale from 0 to 10, where "0" represented the worst possible health plan and "10" the best possible health plan. | CAHPS | No | *Yes* | No |

Methodology detail and sample sizes also are included at the bottom of exhibits containing the results of statistical significance tests between treatment (Demonstration) and comparison group populations.

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[66] In the last 6 months, how often was it easy to get the care, tests, or treatment you (your child) needed?
[67] In the last 6 months, how often did you (your child) get an appointment to see a specialist as soon as you needed?
[68] The approved evaluation design includes the CAHPS Rating of Personal Doctor question. The determination was made not to survey SoonerCare HMP members on this item because the program has no role in the member's selection of a PCMH provider.

## Average Number of Chronic Conditions

*Findings* – HMP Population

The SoonerCare HMP is designed to be holistic and not diagnosis-driven. However, five chronic physical health conditions are prevalent in the member population: asthma, coronary artery disease, chronic obstructive pulmonary disease, diabetes and hypertension.

On average, from 2019 – 2021, approximately 65 percent of SoonerCare HMP members had one or more of the prevalent conditions (Exhibit F-167).



Exhibit F-167 - Health Management Program Number of Chronic Conditions
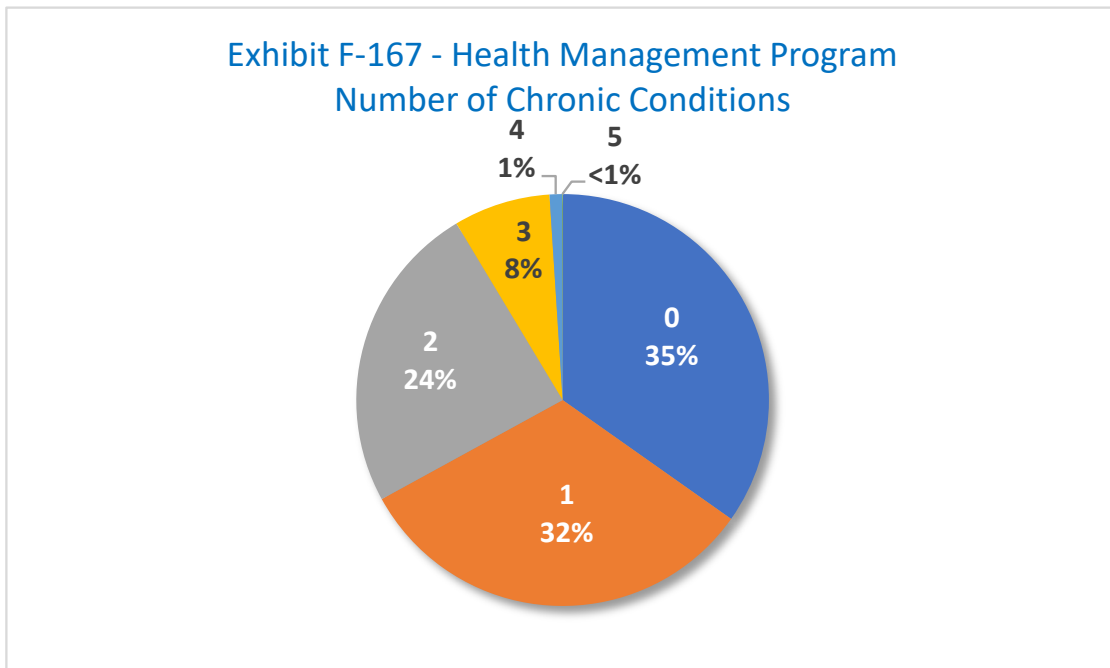
The percentage having one or more of the prevalent chronic conditions declined from 2019 to 2021 (Exhibit F-168).

| Exhibit F-168 – HMP – Number of Chronic Conditions per Member | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Average |
| 0 conditions (of the five) | 28.1% | 36.8% | 37.7% | 34.8% |
| 1 condition | 35.1% | 31.3% | 31.0% | 32.2% |
| 2 conditions | 26.9% | 23.9% | 22.9% | 24.4% |
| 3 conditions | 8.7% | 7.1% | 7.3% | 7.6% |
| 4 conditions | 1.1% | 0.8% | 1.0% | 0.9% |
| 5 conditions | 0.1% | 0.1% | 0.1% | 0.1% |
| 1 or more conditions | 71.9% | 63.2% | 62.3% | 65.2% |

## Percentage of Members with Physical and Behavioral Health Co-Morbidities

### *Findings* – HMP Population

A significant majority of the HMP members with one or more of the prevalent chronic physical health conditions had a behavioral health co-morbidity. The portion ranged from approximately 79 percent for members with diabetes to 90 percent for members with COPD. Common co-morbidities included psychosis and major depression (Exhibit F-169).

**Exhibit F-169 - Health Management Program Behavioral Health Co-Morbidity Rate - 2021**
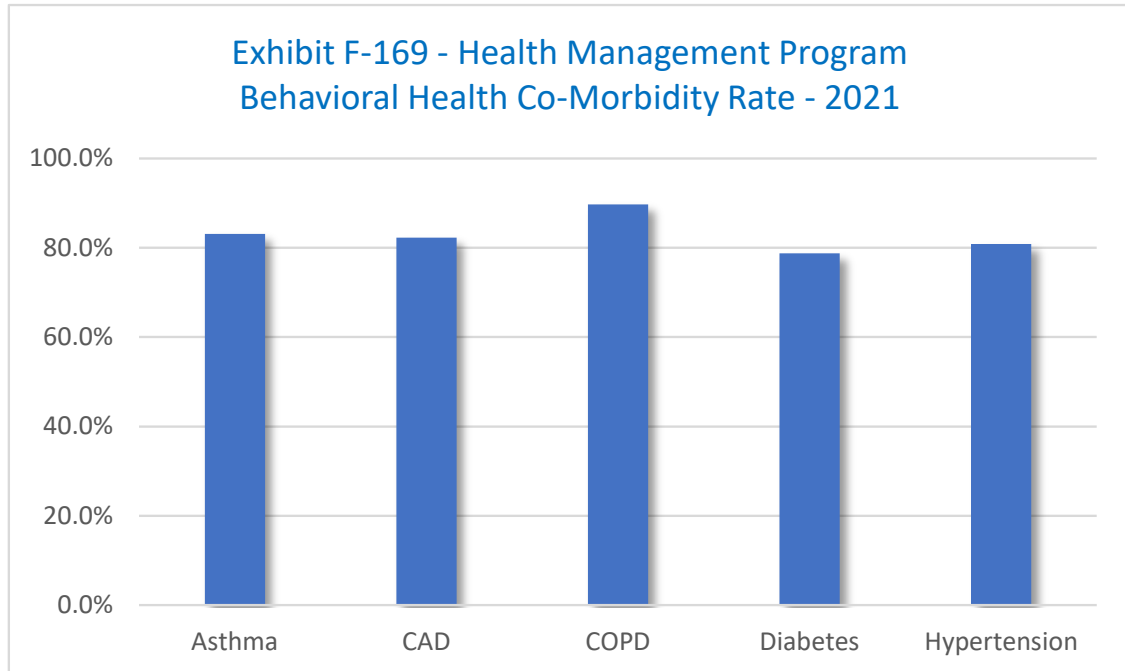


| Asthma | CAD | COPD | Diabetes | Hypertension |
|--------|-----|------|----------|--------------|
| 83.1% | 82.3% | 89.8% | 78.8% | 80.0% |

Behavioral health conditions were prevalent throughout the SoonerCare HMP population in 2021; 79.9 percent had a diagnosis with or without a co-morbidity, versus 29.2 percent for the total SoonerCare Choice population.

# Asthma – Medication Ratio – Ages 5 to 18

## *Findings* – HMP Population

Approximately 79 percent of HMP members and 86 percent of comparison group members were compliant on this measure across the three years (Exhibit F-170). The compliance rate for both populations rose from 2019 to 2021.
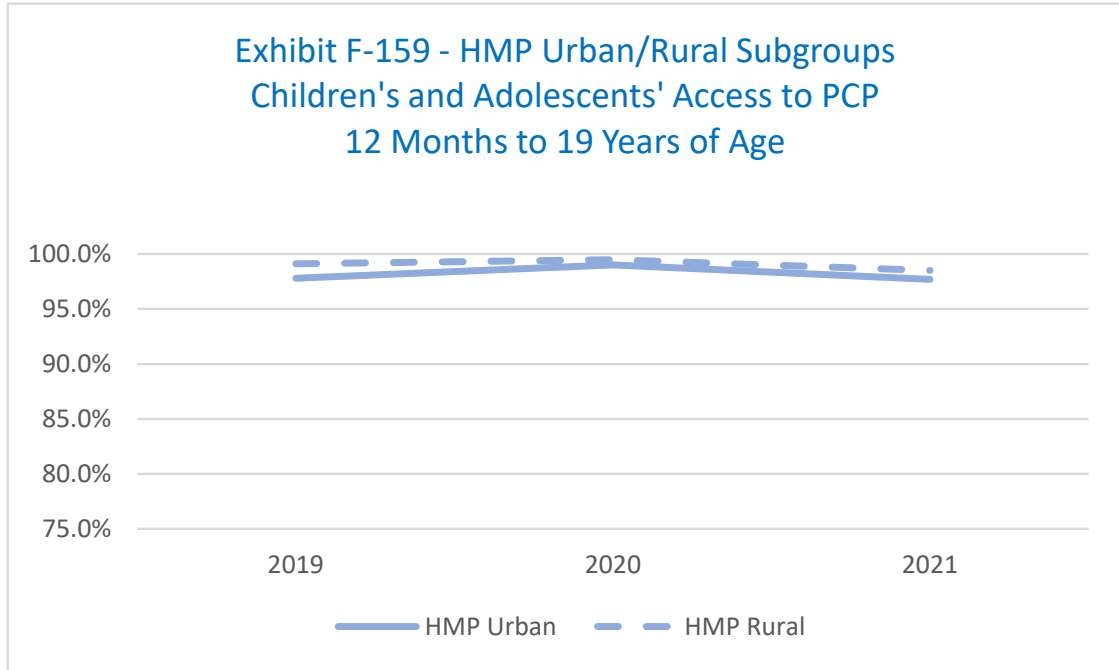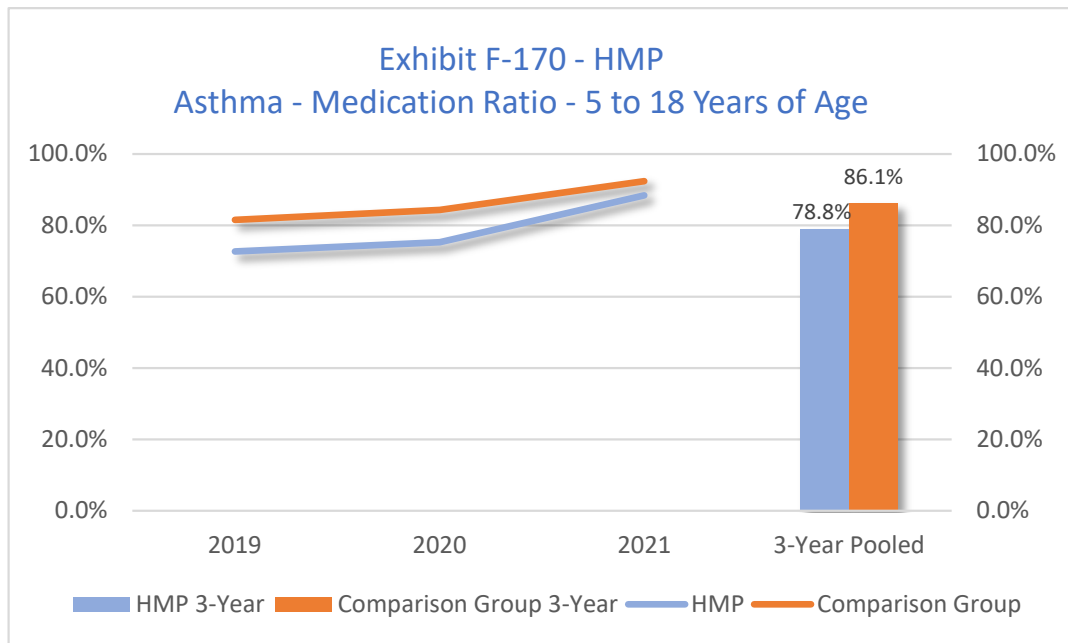


Exhibit F-170 - HMP
Asthma - Medication Ratio - 5 to 18 Years of Age

The difference between the HMP and comparison group compliance rates was statistically significant in 2020. It also was statistically significant for the three-year pooled data (Exhibit F-171).

| Exhibit F-171 – HMP – Asthma – Medication Ratio – 5 to 18 Years of Age | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 72.7% | 75.3% | 88.4% | 78.8% |
| Comparison Group | 81.5% | 84.3% | 92.4% | 86.1% |
| Difference | (8.8%) | (9.0%)‡ | (4.0%) | (7.3%)‡ |
| ‡ HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 13 CG – 5,805 | HMP – 22 CG – 7,715 | HMP – 21 CG – 8,440 | HMP – 51 CG – 21,960 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP and National Benchmark

The three-year pooled rate for the SoonerCare HMP population exceeded the national benchmark rate by approximately 10 percentage points (Exhibit F-172).

(Caution: the benchmark population characteristics were not matched to the OHCA groups to minimize differences in the populations. The data is presented for informational purposes only.)



Exhibit F-172 - HMP versus Benchmark
Asthma Medication Ratio - 5 to 18 Years of Age

|  | HMP | Benchmark |
|---|---|---|
| Compliance Rate | 78.8% | 68.6% |

*Findings* – HMP Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HMP population in the prior waiver period (2016 to 2018).  The compliance rate rose from 76 percent 2016 to approximately 88 percent in 2021 (Exhibit F-173).

**Exhibit F-173 - HMP - Total - Prior and Current Periods Asthma - Medication Ratio - 5 to 18 Years of Age**
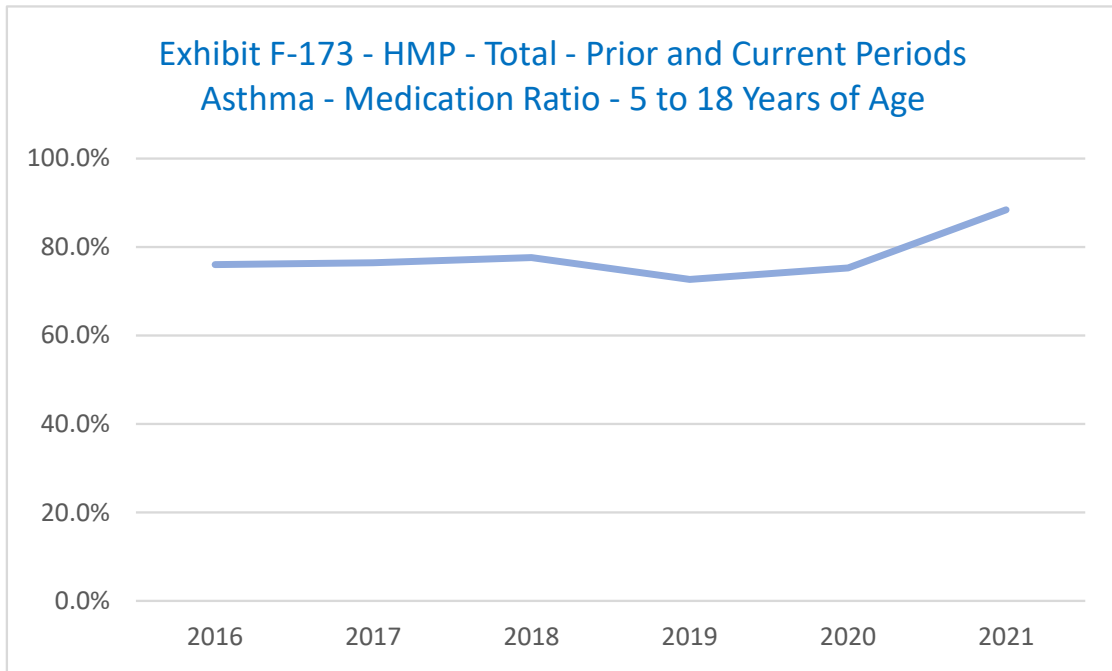


|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| Compliance Rate | 76.0% | 76.4% | 77.6% | 72.7% | 75.3% | 88.4% |

## Asthma – Medication Ratio – Ages 19 to 64

*Findings* – HMP Population

Approximately 83 percent of HMP members and 79 percent of comparison group members were compliant on this measure across the three years (Exhibit F-174). The compliance rate for both populations declined slightly from 2019 to 2020 and rose from 2020 to 2021.
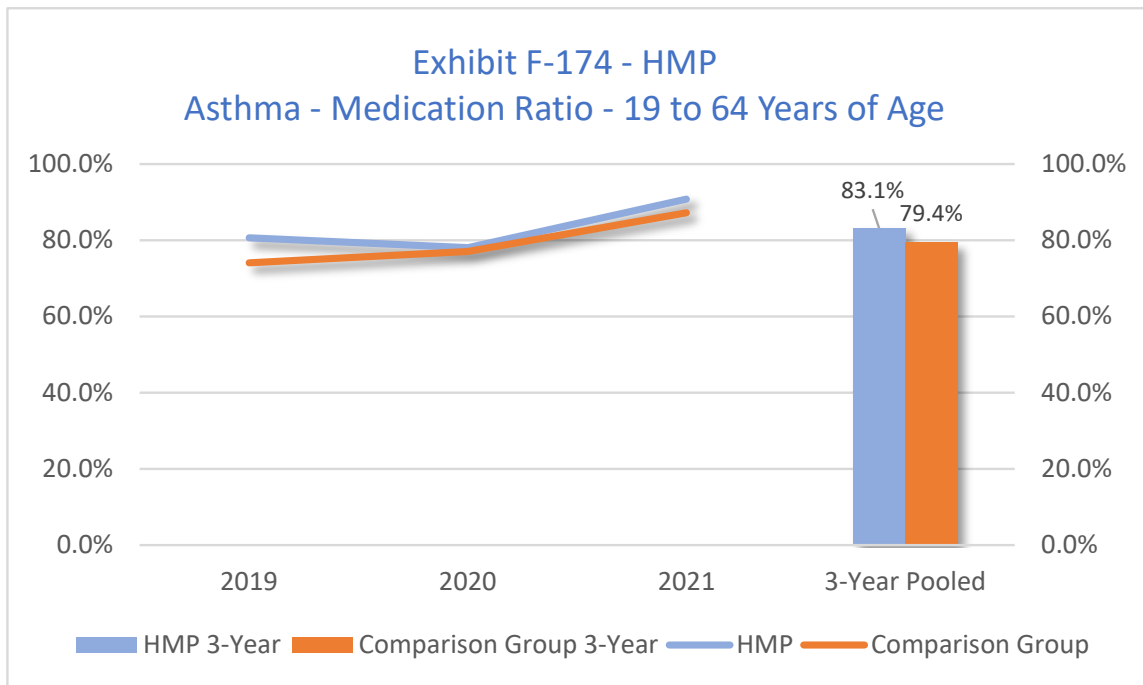


Exhibit F-174 - HMP
Asthma - Medication Ratio - 19 to 64 Years of Age

The difference between the HMP and comparison group compliance rates was statistically significant in 2019. It also was statistically significant for the three-year pooled data (Exhibit F-175).

| Exhibit F-175 – HMP – Asthma – Medication Ratio – 19 to 64 Years of Age | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 80.6% | 78.0% | 90.8% | 83.1% |
| Comparison Group | 74.1% | 77.0% | 87.2% | 79.4% |
| Difference | 6.5%‡ | 1.0% | 3.6% | 3.7%‡ |
| ‡   HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 222 CG – 1,425 | HMP – 326 CG – 2,304 | HMP – 279 CG – 2,825 | HMP – 827 CG – 6,554 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

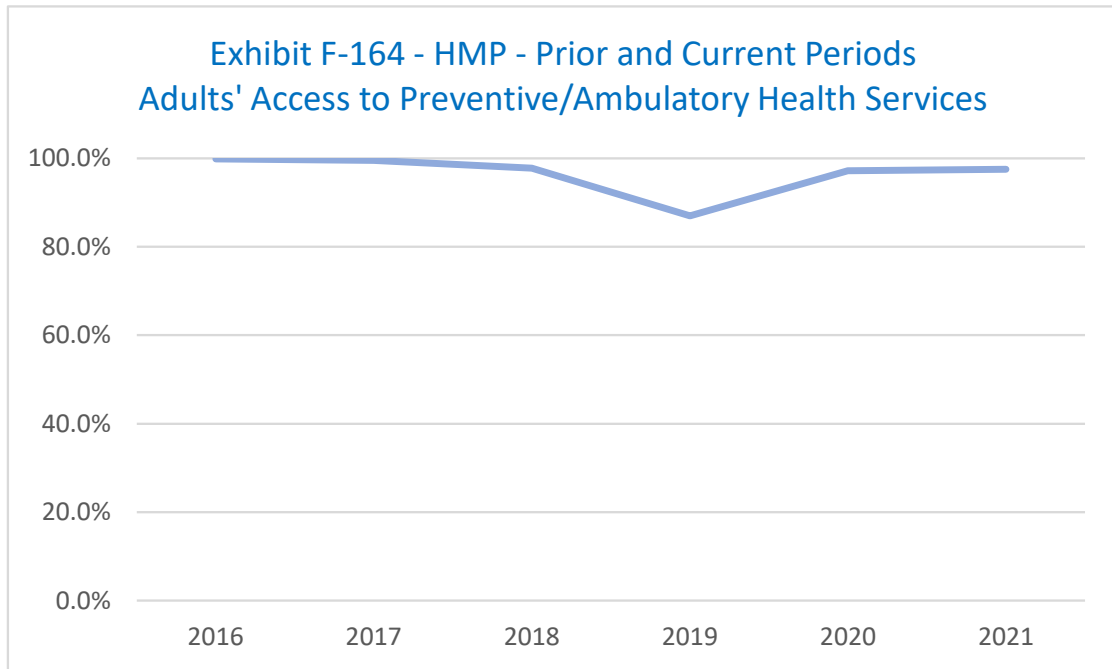*Findings* – HMP and Care Managed Populations – Urban and Rural Subgroups

The HMP rural subgroup rate exceeded the urban rate in all three years. The compliance rate for both subgroups trended slightly downward from 2019 to 2020 and upward from 2020 to 2021 (Exhibit F-176).

**Exhibit F-176 - HMP Urban/Rural Subgroups**
**Asthma - Medication Ratio - 19 to 64 Years of Age**
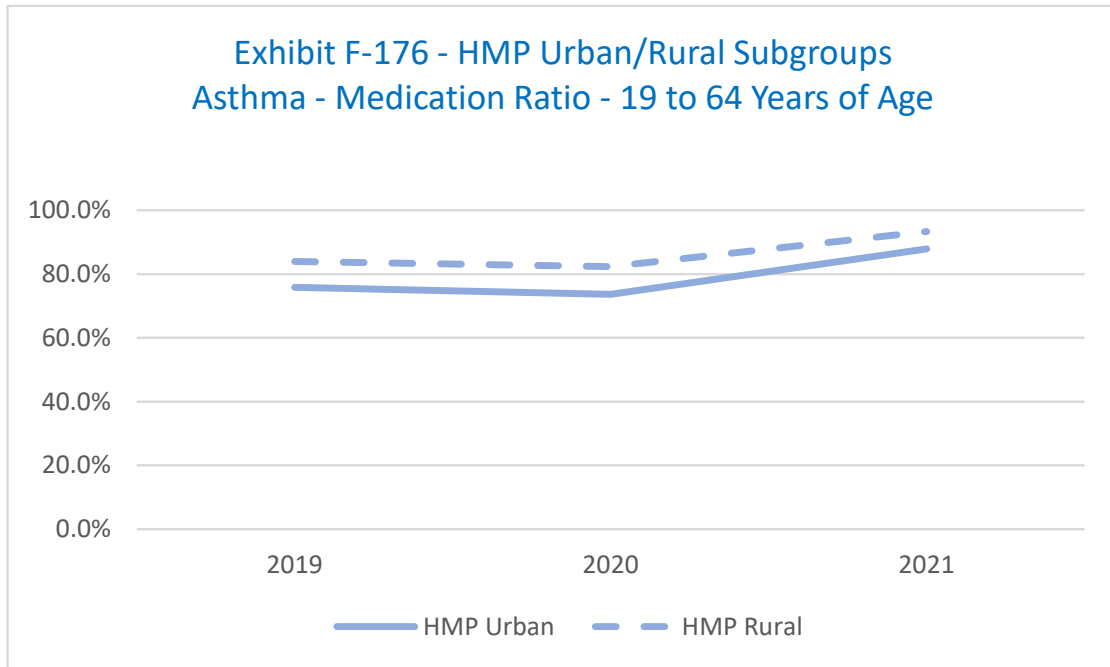


|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Compliance Rate | **Urban** | 75.8% | 73.6% | 87.9% |
|  | **Rural** | 84.0% | 82.4% | 93.4% |

*Findings* – HMP and Care Managed Populations and National Benchmark

The three-year pooled rate for the SoonerCare HMP population exceeded the national benchmark rate by approximately 29 percentage points (Exhibit F-177).

(Caution: the benchmark population characteristics were not matched to the OHCA groups to minimize differences in the populations. The data is presented for informational purposes only.)

**Exhibit F-177 - HMP versus Benchmark**
**Asthma Medication Ratio - 19 to 64 Years of Age**
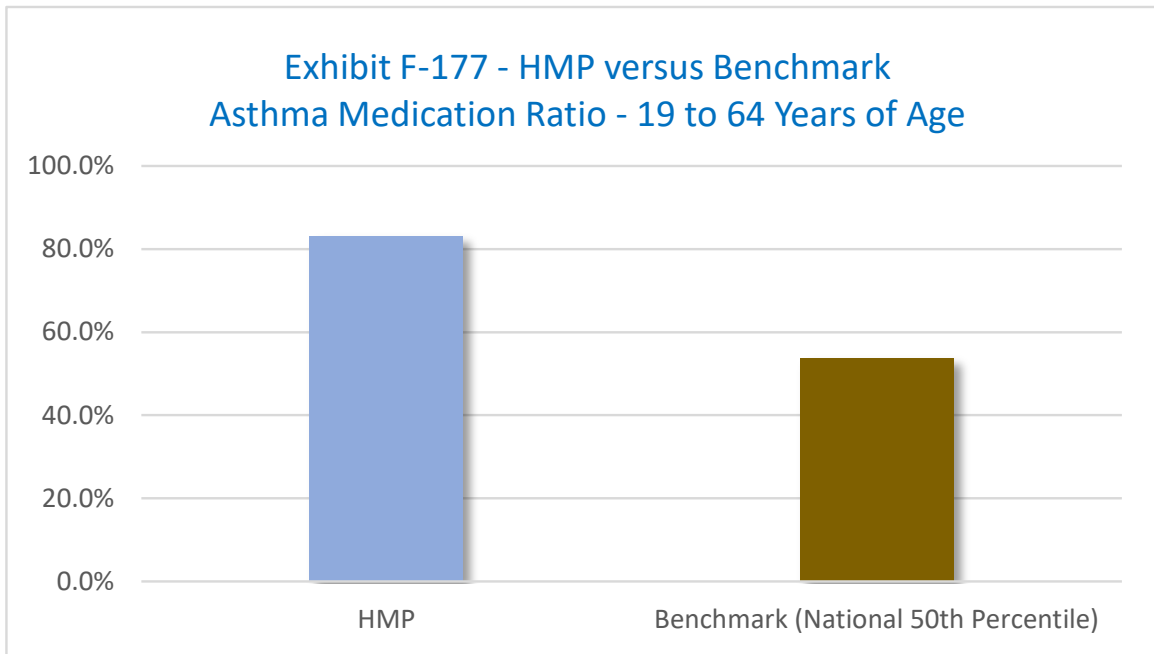


|  | HMP | Benchmark |
|---|---|---|
| Compliance Rate | 83.1% | 53.7% |

*Findings* – HMP Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HMP population in the prior waiver period (2016 to 2018). The compliance rate rose from 70 approximately percent in 2016 to 91 percent in 2021 (Exhibit F-178).

**Exhibit F-178 - HMP- Prior and Current Periods**
**Asthma - Medication Ratio - 19 to 64 Years of Age**
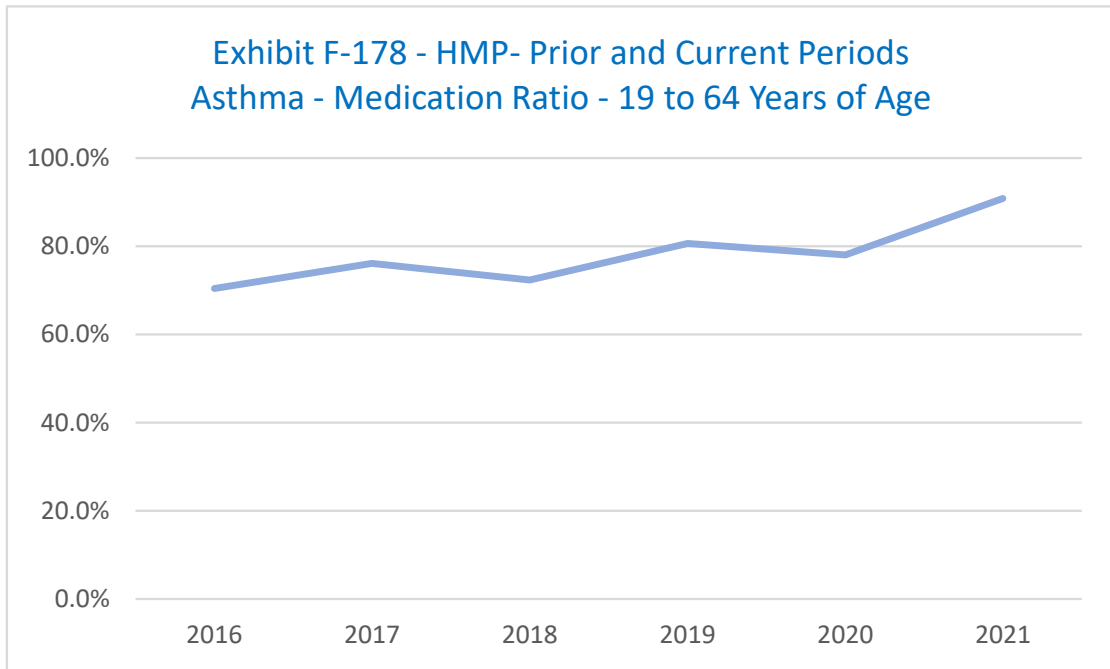


|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| Compliance Rate | 70.4% | 76.1% | 72.3% | 80.6% | 78.0% | 90.8% |

## Coronary Artery Disease – Persistent Beta Blocker Treatment after a Heart Attack

*Findings* – HMP Population

Approximately 47 percent of HMP members and 46 percent of comparison group members were compliant on this measure across the three years (Exhibit F-179). The compliance rate rose for both populations from 2019 to 2021.
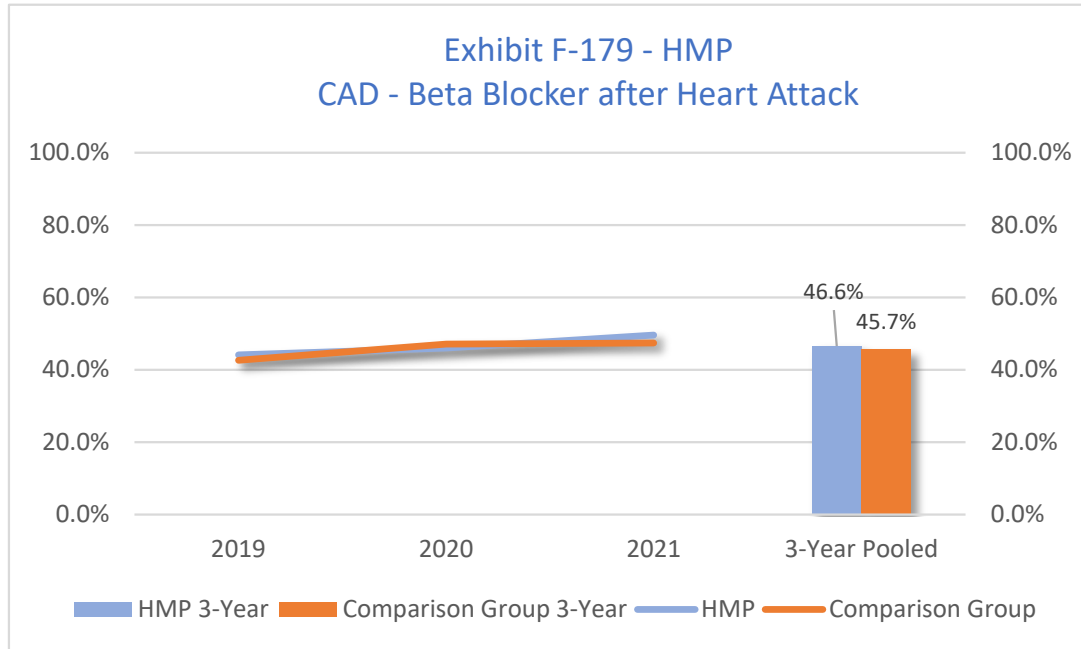


Exhibit F-179 - HMP
CAD - Beta Blocker after Heart Attack

The difference between the HMP and comparison group compliance rates was not statistically significant in any of the individual years. It also was not statistically significant for the three-year pooled data (Exhibit F-180).

| Exhibit F-180 – HMP – CAD – Beta Blocker after Heart Attack | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 44.1% | 46.0% | 49.6% | 46.6% |
| Comparison Group | 42.6% | 47.1% | 47.4% | 45.7% |
| Difference | 1.5% | (1.1%) | 2.2% | 0.9% |
| ‡  HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 612 CG – 854 | HMP – 624 CG – 777 | HMP – 569 CG – 752 | HMP – 1,805 CG – 2,383 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP and Care Managed Populations – Urban and Rural Subgroups

The HMP rural subgroup had a slightly higher compliance rate than the urban subgroup across the three years. The compliance rate for both subgroups trended upward from 2019 to 2021 (Exhibit F-181).



Exhibit F-181 - HMP Urban/Rural Subgroups
CAD - Beta Blocker after Heart Attack

| | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Compliance Rate | **Urban** | 42.7% | 45.6% | 48.6% |
| | **Rural** | 45.3% | 47.7% | 50.7% |

## Coronary Artery Disease – Cholesterol Management – LDL-C Test

*Findings* – HMP Population

Approximately 66 percent of HMP members and 60 percent of comparison group members were compliant on this measure across the three years (Exhibit F-182). The compliance rate for both populations declined from 2019 to 2020 before rising again from 2020 to 2021.



Exhibit F-182 - HMP
CAD - Cholesterol Management - LDL-C Test
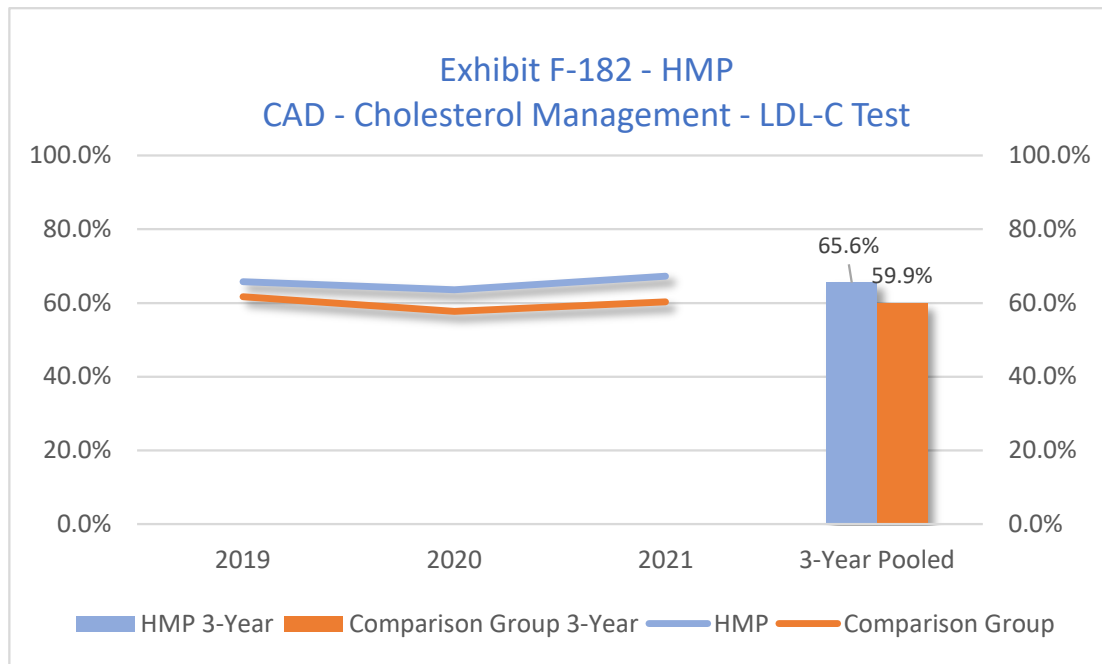
The difference between the HMP and comparison group compliance rates was statistically significant in 2020 and 2021. It also was statistically significant for the three-year pooled data (Exhibit F-183).

| Exhibit F-183 – HMP – CAD – Cholesterol Management – LDL-C Test | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 65.8% | 63.6% | 67.3% | 65.6% |
| Comparison Group | 61.7% | 57.7% | 60.3% | 59.9% |
| Difference | 4.1% | 5.9%‡ | 7.0%‡ | 5.7%‡ |
| ‡ HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 612 CG – 854 | HMP – 624 CG – 777 | HMP – 569 CG – 752 | HMP – 1,805 CG – 2,383 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP and Care Managed Populations – Urban and Rural Subgroups

The HMP urban subgroup compliance rate exceeded the rural subgroup rate across the three years. The compliance rate for both subgroups trended downward from 2019 to 2020 and upward from 2019 to 2021 (Exhibit F-184).

**Exhibit F-184 - HMP Urban/Rural Subgroups CAD - Cholesterol Management - LDL-C Test**



|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Compliance Rate | **Urban** | 67.8% | 64.4% | 68.4% |
|  | **Rural** | 64.5% | 63.1% | 65.9% |

# Chronic Obstructive Pulmonary Disease – Use of Spirometry Testing

*Findings* – HMP Population

Approximately 22 percent of HMP members and 19 percent of comparison group members were compliant on this measure across the three years (Exhibit F-185). The compliance rate for both populations declined from 2019 to 2021.
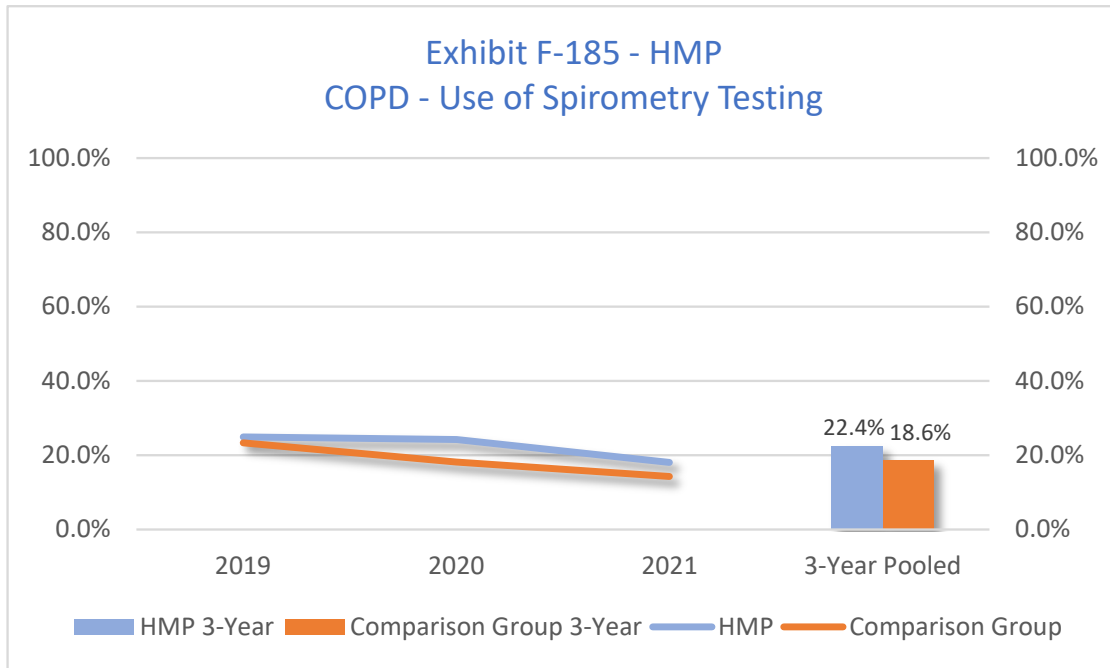


The difference between the HMP and comparison group compliance rates was statistically significant in 2020. It also was statistically significant for the three-year pooled data (Exhibit F-186).

| Exhibit F-186 – HMP – COPD – Use of Spirometry Testing | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 24.9% | 24.2% | 18.1% | 22.4% |
| Comparison Group | 23.3% | 18.2% | 14.3% | 18.6% |
| Difference | 1.6% | 6.0%‡ | 3.8% | 3.8%‡ |
| ‡ HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 377 CG – 738 | HMP – 418 CG – 858 | HMP – 480 CG – 929 | HMP – 1,275 CG – 2,525 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP and Care Managed Populations – Urban and Rural Subgroups

The HMP urban subgroup rate exceeded the rural rate in 2019 and 2020; the rural subgroup rate exceeded the urban rate in 2021. The rate for the urban subgroup trended downward from 2019 to 2021; the rate for the rural subgroup trended upward from 2019 to 2020 and downward from 2020 to 2021 (Exhibit F-187).



Exhibit F-187 - HMP Urban/Rural Subgroups
COPD - Use of Spirometry Testing
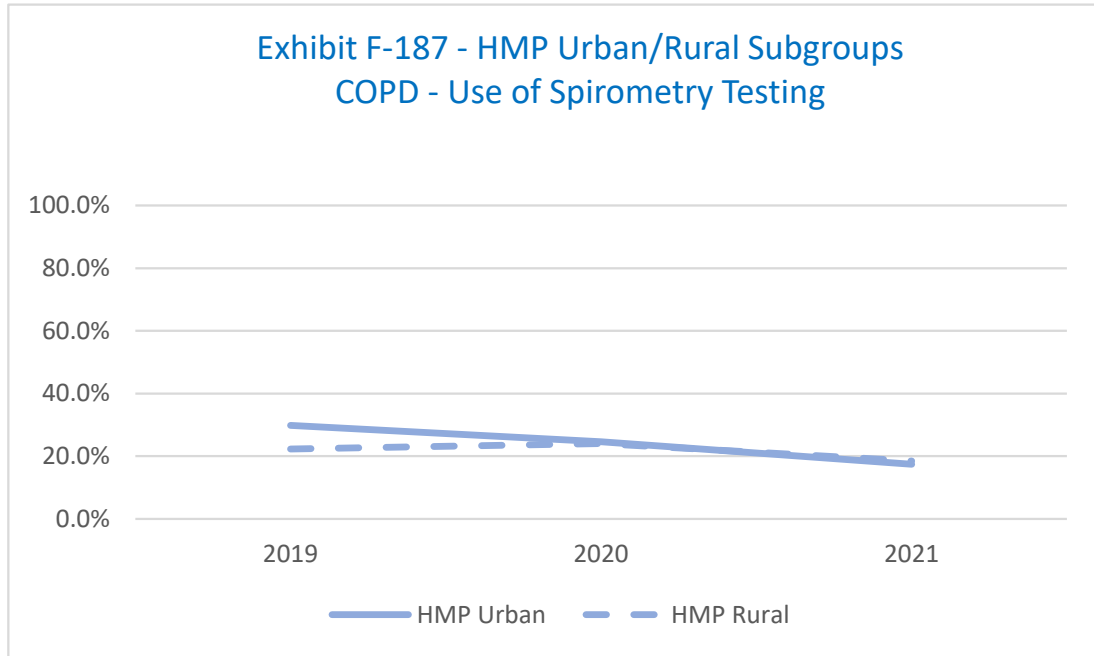
| | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Compliance Rate | **Urban** | 29.9% | 24.6% | 17.4% |
| | **Rural** | 22.3% | 24.0% | 18.5% |

## Chronic Obstructive Pulmonary Disease – Pharmacotherapy Management of Exacerbation – 14 Days

*Findings* – HMP Population

Approximately 66 percent of HMP members and 66 percent of comparison group members were compliant on this measure across the three years (Exhibit F-188). The compliance rate for the HMP population declined from 2019 to 2020 before rising again from 2020 to 2021. The compliance rate for the comparison group rose from 2019 to 2020 before declining from 2020 to 2021.



Exhibit F-188 - HMP
COPD - Pharmacotherapy - 14 Days

The difference between the HMP and comparison group compliance rates was not statistically significant in any of the individual years. It also was not statistically significant for the three-year pooled data (Exhibit F-189).

| Exhibit F-189 – HMP – COPD – Pharmacotherapy – 14 Days | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 68.9% | 62.7% | 66.2% | 65.9% |
| Comparison Group | 64.0% | 67.6% | 66.9% | 66.2% |
| Difference | 4.9% | (4.9%) | (0.7%) | (0.3%) |
| ‡　HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 209 CG – 340 | HMP – 209 CG – 278 | HMP – 139 CG – 187 | HMP – 557 CG – 805 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP and Care Managed Populations – Urban and Rural Subgroups

The HMP rural subgroup had a higher compliance rate than the urban subgroup in 2019; the urban subgroup had a higher rate in 2020 and 2021. The rates for both groups trended downward from 2019 to 2020 and trended upward from 2020 to 2021 (Exhibit F-190).

**Exhibit F-190 - HMP Urban/Rural Subgroups**
**COPD - Pharmacotherapy - 14 Days**
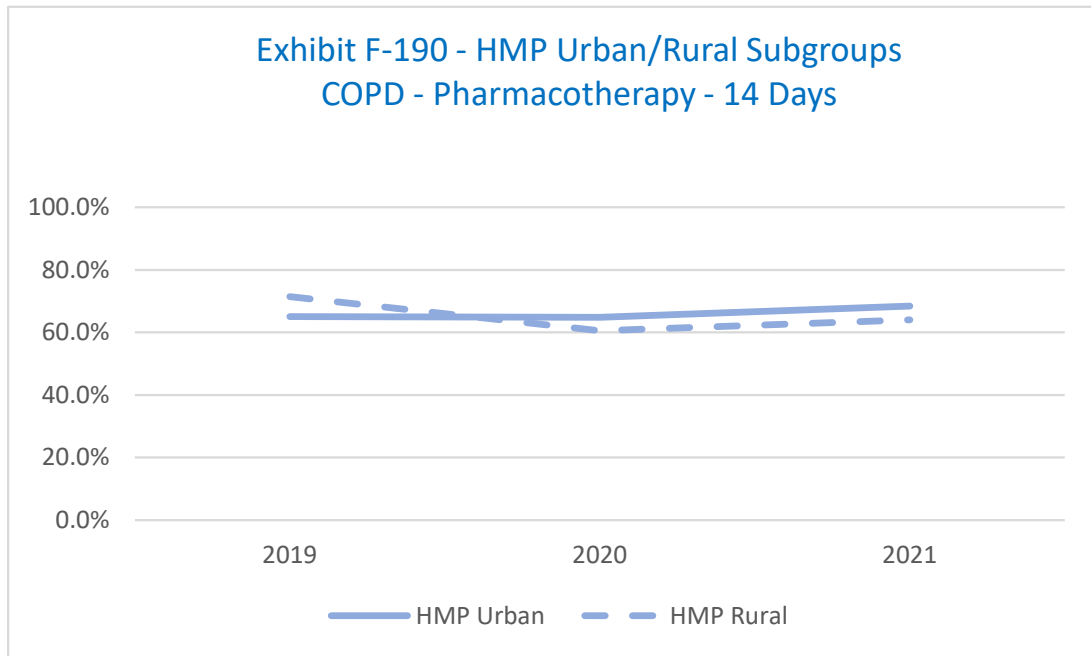


| | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| **Compliance Rate** | **Urban** | 65.1% | 64.9% | 68.4% |
| | **Rural** | 71.5% | 60.5% | 64.0% |

## Chronic Obstructive Pulmonary Disease – Pharmacotherapy Management of Exacerbation – 30 Days

*Findings* – HMP Population

Approximately 76 percent of HMP members and 73 percent of comparison group members were compliant on this measure across the three years (Exhibit F-191). The compliance rate for both populations declined from 2019 to 2020 and rose again from 2020 to 2021.

**Exhibit F-191 - HMP COPD - Pharmacotherapy - 30 Days**
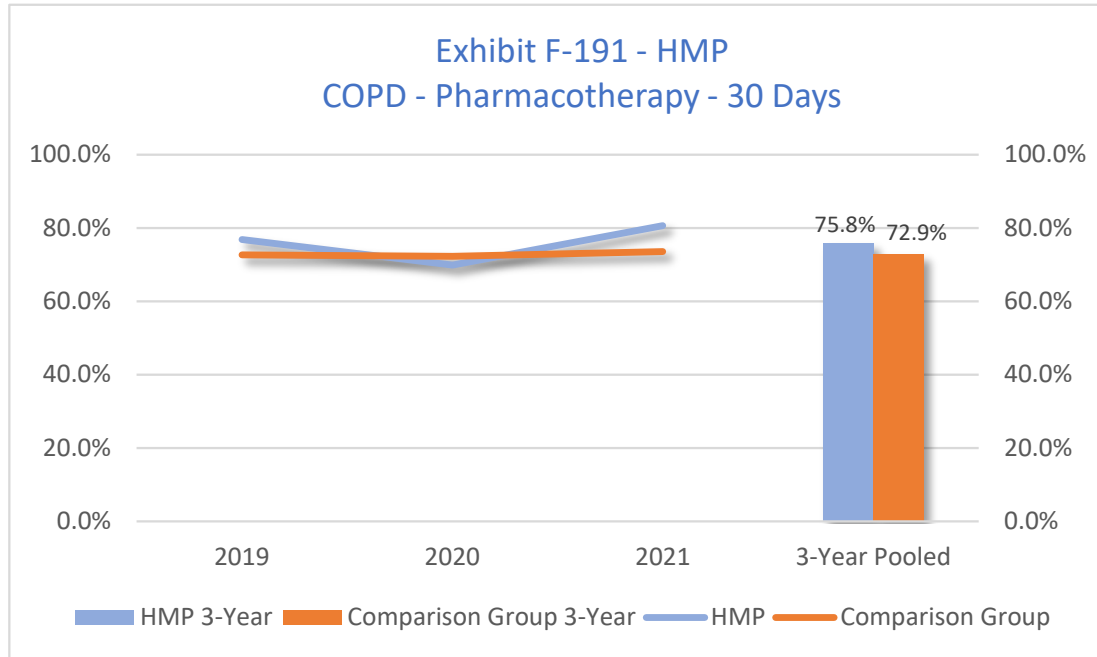


The difference between the HMP and comparison group compliance rates was not statistically significant in any of the individual years. It also was not statistically significant for the three-year pooled data (Exhibit F-192).

| Exhibit F-192 – HMP – COPD – Pharmacotherapy – 30 Days | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 76.8% | 69.9% | 80.6% | 75.8% |
| Comparison Group | 72.7% | 72.3% | 73.6% | 72.9% |
| Difference | 4.1% | (2.4%) | 7.0% | 2.9% |
| ‡   HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 209 CG – 340 | HMP – 209 CG – 278 | HMP – 139 CG – 187 | HMP – 557 CG – 805 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP and Care Managed Populations – Urban and Rural Subgroups

The HMP rural subgroup had a higher compliance rate than the urban subgroup in 2019 and 2020; the urban subgroup had a higher rate in 2021. The rates for both groups trended downward from 2019 to 2020 and trended upward from 2020 to 2021 (Exhibit F-193).

## Exhibit F-193 - HMP Urban/Rural Subgroups
## COPD - Pharmacotherapy - 30 Days
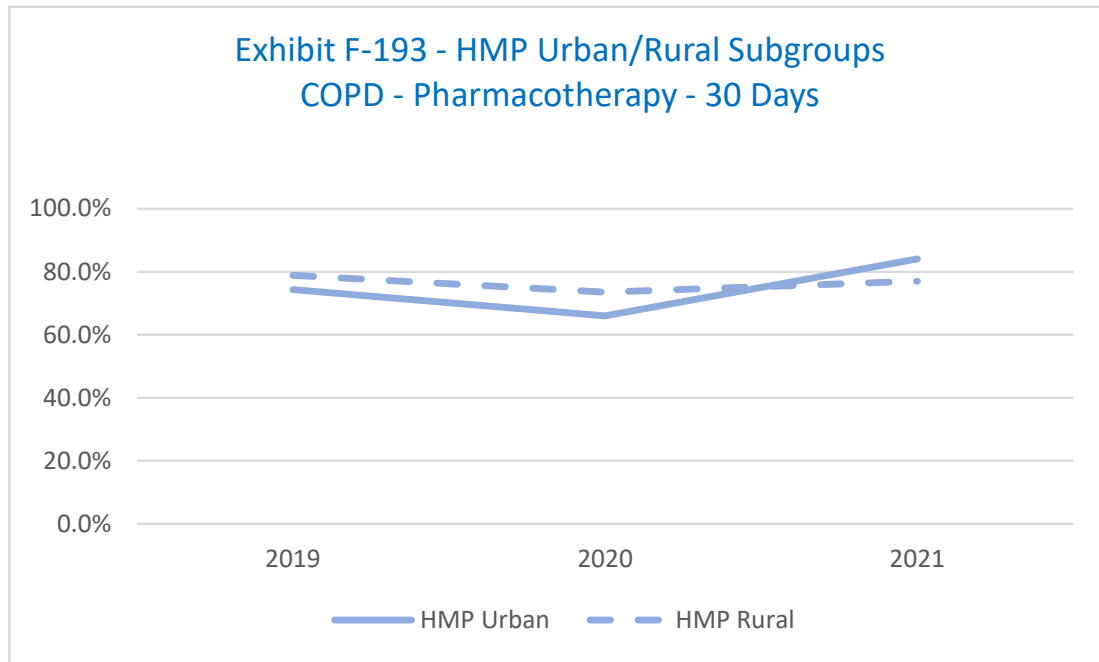


| | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Compliance Rate | **Urban** | 74.4% | 66.0% | 84.1% |
| | **Rural** | 78.9% | 73.5% | 77.0% |

## Diabetes – LDL-C Test

*Findings* – HMP Population

Approximately 66 percent of HMP members and 55 percent of comparison group members were compliant on this measure across the three years (Exhibit F-194). The compliance rate for both populations declined from 2019 to 2020 before rising again from 2020 to 2021.



Exhibit F-194 - HMP
Diabetes - LDL-C Test

The difference between the HMP and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-195).

| Exhibit F-195 – HMP – Diabetes – LDL-C Test | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 65.5% | 64.8% | 67.2% | 65.8% |
| Comparison Group | 58.1% | 50.5% | 56.7% | 55.1% |
| Difference | 7.4%‡ | 14.3%‡ | 10.5%‡ | 10.7%‡ |
| ‡  HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 1,777 CG – 3,716 | HMP – 2,272 CG – 4,464 | HMP – 2,044 CG – 4,744 | HMP – 6,093 CG – 12,924 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP and Care Managed Populations – Urban and Rural Subgroups

The HMP urban subgroup compliance rate exceeded the rural subgroup rate in 2019 and 2021; the rural subgroup rate exceeded the urban subgroup rate in 2020. The urban subgroup rate trended slightly downward from 2019 to 2020 and upward from 2020 to 2021; the rural subgroup rate trended slightly upward from 2019 to 2021 (Exhibit F-196).

**Exhibit F-196 - HMP Urban/Rural Subgroups**
**Diabetes - LDL-C Test**
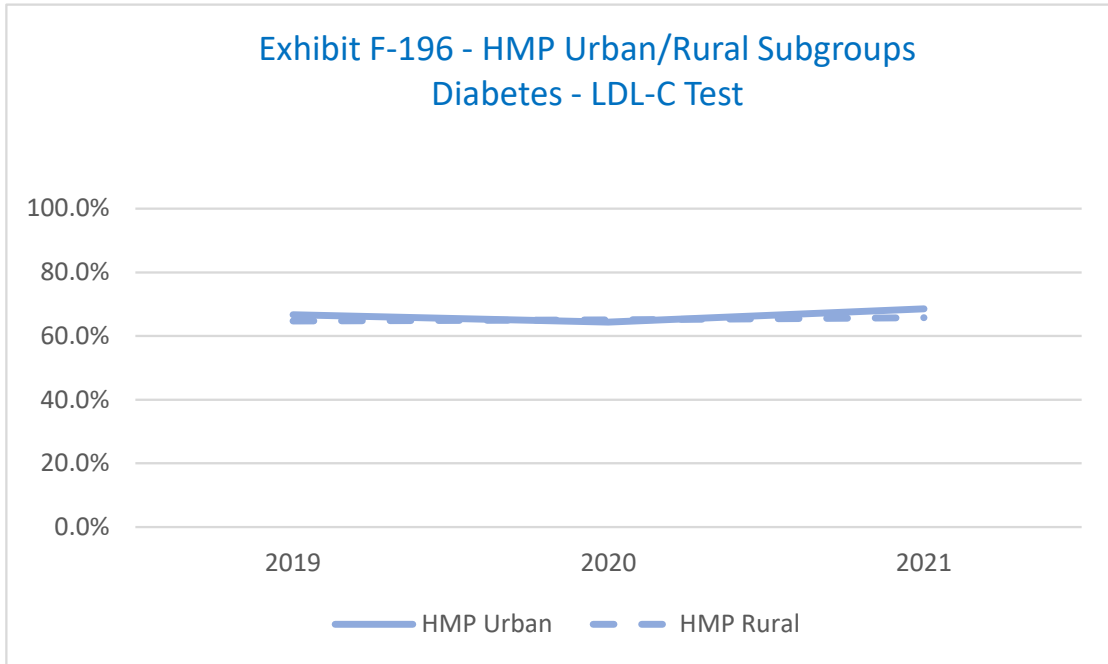


|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Compliance Rate | **Urban** | 66.7% | 64.4% | 68.5% |
|  | **Rural** | 64.7% | 65.1% | 65.8% |

*Findings* – HMP Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HMP population in the prior waiver period (2016 to 2018). The compliance rate rose from approximately 61 percent in 2016 to 76 percent in 2017, before declining to 66 percent in 2018 and rising again to 67 percent in 2021 (Exhibit F-197).



Exhibit F-197 - HMP - Prior and Current Periods
Diabetes - LDL-C Test
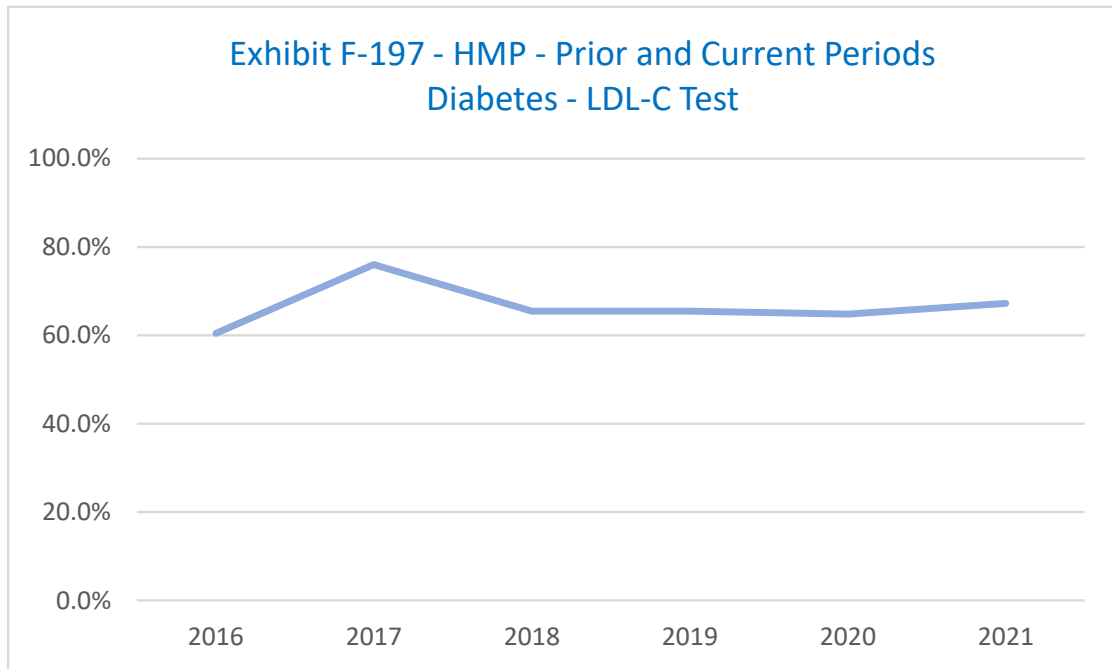
|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| Compliance Rate | 60.5% | 76.0% | 65.5% | 65.5% | 64.8% | 67.2% |

## Diabetes – Retinal Eye Exam

*Findings* – HMP Population

Approximately 34 percent of HMP members and 22 percent of comparison group members were compliant on this measure across the three years (Exhibit F-198). The compliance 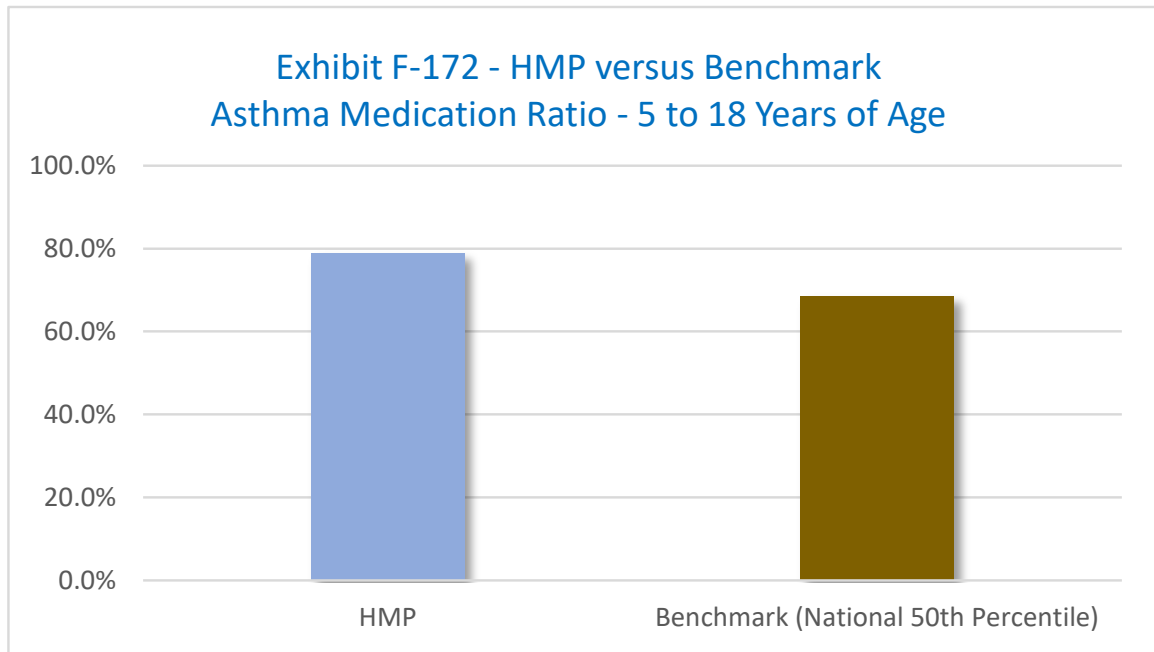rate for the HMP population rose from 2019 to 2021; the compliance rate for the comparison group declined from 2019 to 2020 before rising again from 2020 to 2021.



The difference between the HMP and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-199).

| Exhibit F-199 – HMP – Diabetes – Retinal Eye Exam | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 32.2% | 32.8% | 36.0% | 33.7% |
| Comparison Group | 25.3% | 19.8% | 21.5% | 22.2% |
| Difference | 6.9%‡ | 13.0%‡ | 14.5%‡ | 11.5%‡ |
| ‡ HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 1,777 CG – 3,716 | HMP – 2,272 CG – 4,464 | HMP – 2,044 CG – 4,744 | HMP – 6,093 CG – 12,924 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP and Care Managed Populations – Urban and Rural Subgroups

The HMP rural subgroup rate exceeded the urban subgroup rate across the three years.  The rural subgroup trended upward from 2019 to 2021. The urban subgroup trended downward from 2019 to 2021 before rising again from 2020 to 2021 (Exhibit F-200).

**Exhibit F-200 - HMP Urban/Rural Subgroups**
**Diabetes - Retinal Eye Exam**
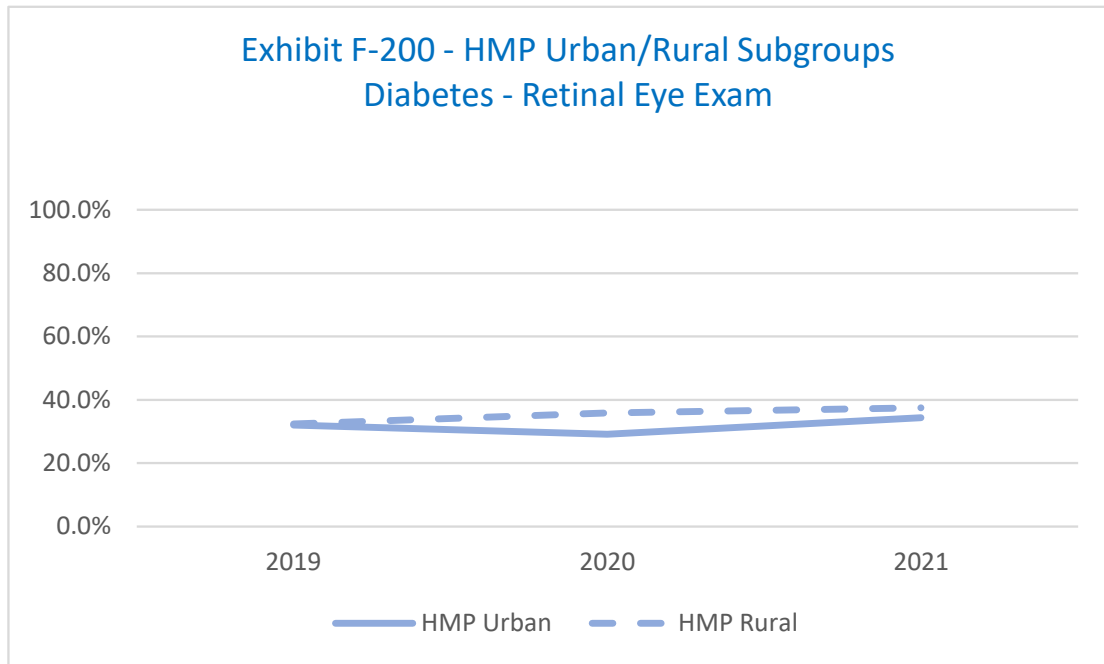


| | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Compliance Rate | **Urban** | 32.0% | 29.1% | 34.4% |
| | **Rural** | 32.4% | 35.9% | 37.5% |

*Findings* – HMP Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HMP population in the prior waiver period (2016 to 2018). The compliance rate rose from approximately 33 percent in 2016 to 36 percent in 2021 (Exhibit F-201).

**Exhibit F-201 - HMP - Prior and Current Periods Diabetes - Retinal Eye Exam**
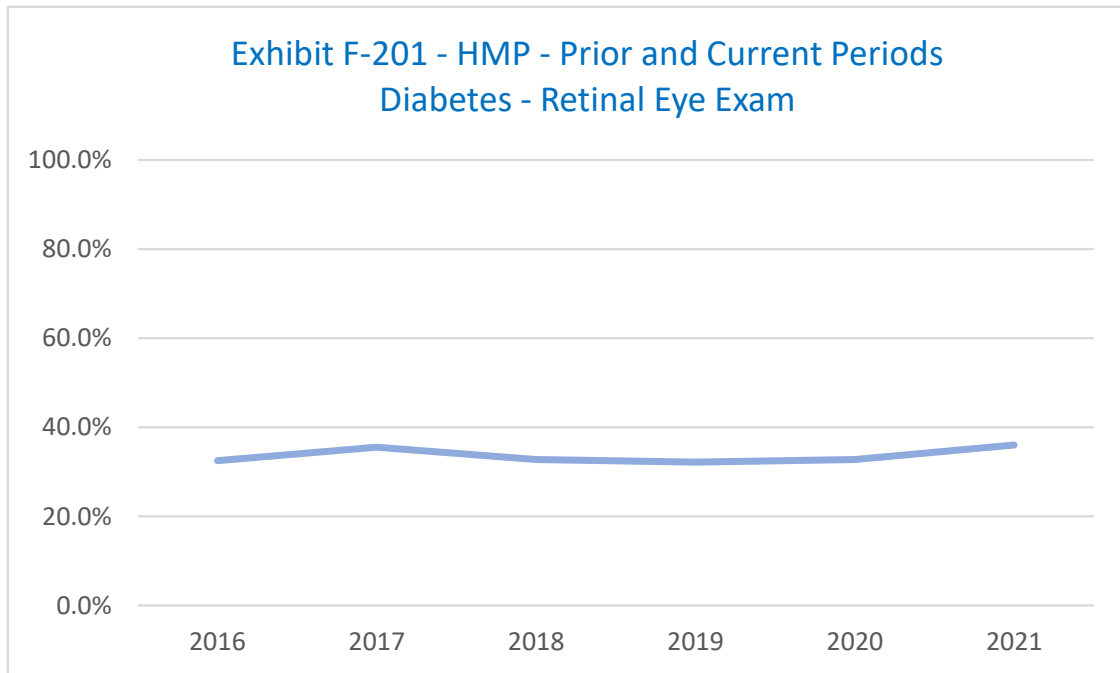
|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| Compliance Rate | 32.5% | 35.5% | 32.8 % | 32.2% | 32.8% | 36.0% |

## Diabetes – HbA1c Testing

*Findings* – HMP Population

Approximately 79 percent of HMP members and 69 percent of comparison group members were compliant on this measure across the three years (Exhibit F-202). The compliance rate for both populations declined from 2019 to 2020 before rising again from 2020 to 2021.

**Exhibit F-202 - HMP**
**Diabetes - HbA1c Testing**

[Chart showing HMP and Comparison Group compliance rates for 2019, 2020, 2021, and 3-Year Pooled. 3-Year Pooled: HMP 79.4%, Comparison Group 68.8%]

Legend: HMP 3-Year | Comparison Group 3-Year | HMP | Comparison Group

The difference between the HMP and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-203).

| Exhibit F-203 – HMP – Diabetes – HbA1c Testing | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 80.2% | 77.9% | 80.0% | 79.4% |
| Comparison Group | 72.5% | 65.8% | 68.2% | 68.8% |
| Difference | 7.7%‡ | 12.1%‡ | 11.8%‡ | 10.6%‡ |
| ‡ HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 1,777 CG – 3,716 | HMP – 2,272 CG – 4,464 | HMP – 2,044 CG – 4,744 | HMP – 6,093 CG – 12,924 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP and Care Managed Populations – Urban and Rural Subgroups

The HMP urban subgroup rate exceeded the rural subgroup rate across the three years. The compliance rate for both subgroups trended downward from 2019 to 2020 and trended upward from 2020 to 2021 (Exhibit F-204).



Exhibit F-204 - HMP Urban/Rural Subgroups
Diabetes - HbA1c Testing

|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Compliance Rate | **Urban** | 83.3% | 79.9% | 80.3% |
|  | **Rural** | 78.2% | 76.2% | 79.6% |

*Findings* – HMP Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HMP population in the prior waiver period (2016 to 2018). The compliance rate rose from approximately 77 percent in 2016 to 83 percent in 2018, before declining to 78 percent and rising again to 80 percent in 2021 (Exhibit F-205).

**Exhibit F-205 - HMP - Prior and Current Periods**
**Diabetes - HbA1c Testing**
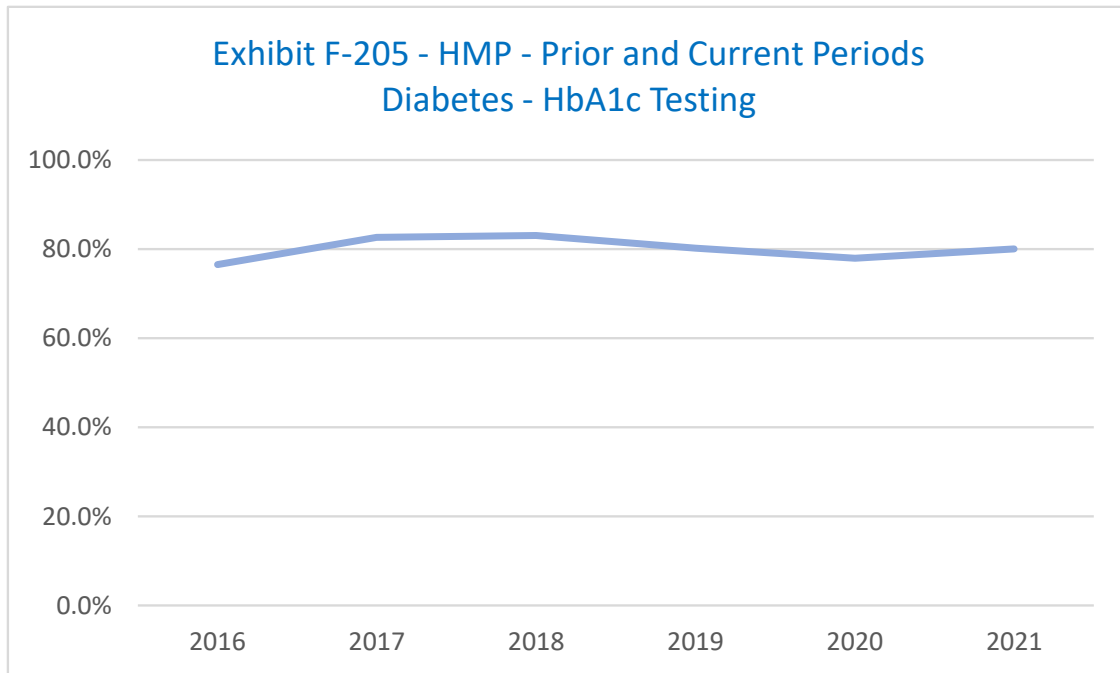
|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| Compliance Rate | 76.5% | 82.6% | 83.0 % | 80.2% | 77.9% | 80.0% |

## Diabetes – Medical Attention for Nephropathy

*Findings* – HMP Population

Approximately 87 percent of HMP members and 81 percent of comparison group members were compliant on this measure across the three years (Exhibit F-206). The compliance rate for both populations declined from 2019 to 2020 before rising again from 2020 to 2021.



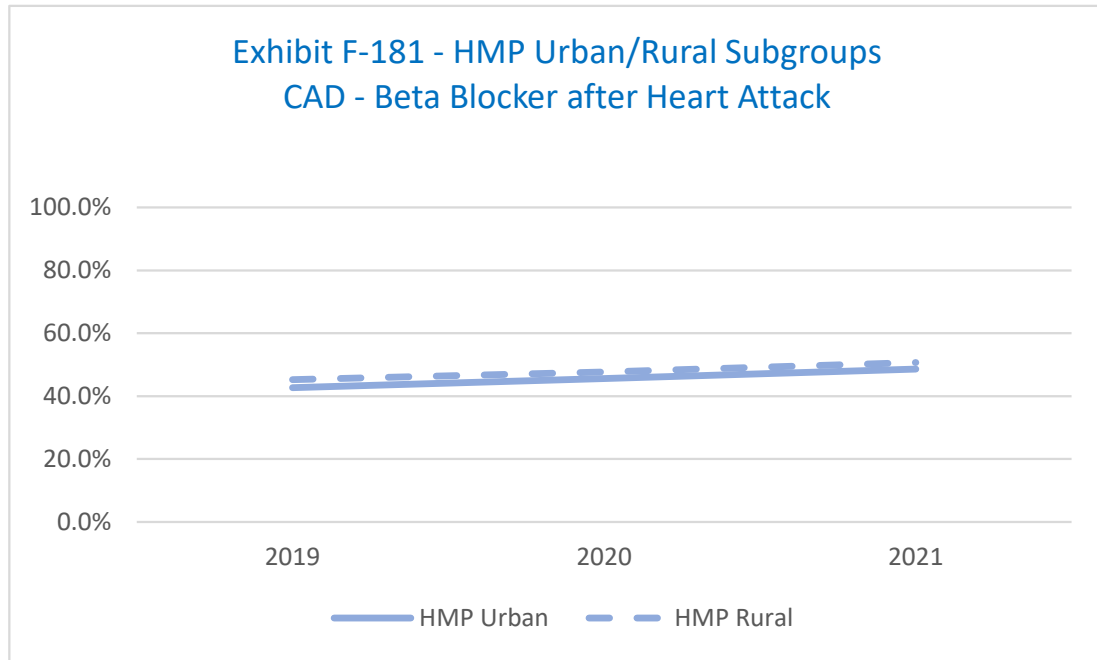The difference between the HMP and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-207).

| Exhibit F-207 – HMP – Diabetes – Medical Attention for Nephropathy | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 89.3% | 85.8% | 86.9% | 87.3% |
| Comparison Group | 84.7% | 78.6% | 80.7% | 81.3% |
| Difference | 4.6%‡ | 7.2%‡ | 6.2%‡ | 6.0%‡ |
| ‡   HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 1,777 CG – 3,716 | HMP – 2,272 CG – 4,464 | HMP – 2,044 CG – 4,744 | HMP – 6,093 CG – 12,924 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP and Care Managed Populations – Urban and Rural Subgroups

The HMP urban and rural subgroups had identical compliance rates in 2019; the rural subgroup rate was slightly higher in 2020 and the urban subgroup rate was higher in 2021.  The urban subgroup rate trended downward from 2019 to 2020 and trended upward from 2020 to 2021. The rural subgroup rate trended downward from 2019 to 2021 (Exhibit F-208).

Exhibit F-208 - HAN Urban/Rural Subgroups
Diabetes - Medical Attention for Nephropathy
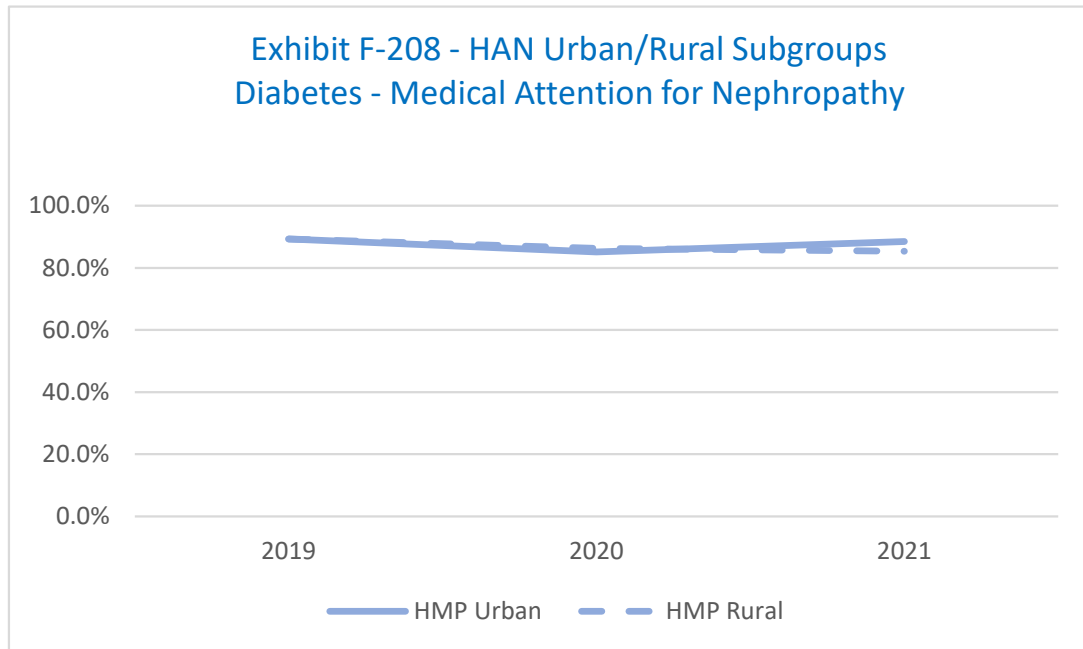
| | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Compliance Rate | **Urban** | 89.3% | 85.1% | 88.5% |
| | **Rural** | 89.3% | 86.3% | 85.1% |

*Findings* – HMP Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HMP population in the prior waiver period (2016 to 2018). The compliance rate rose from approximately 83 percent in 2016 to 89 percent in 2019, before declining to 86 percent in 2020 and rising again slightly to 87 percent in 2021 (Exhibit F-209).

Exhibit F-209 - HMP - Prior and Current Periods
Diabetes - Medical Attention for Nephropathy
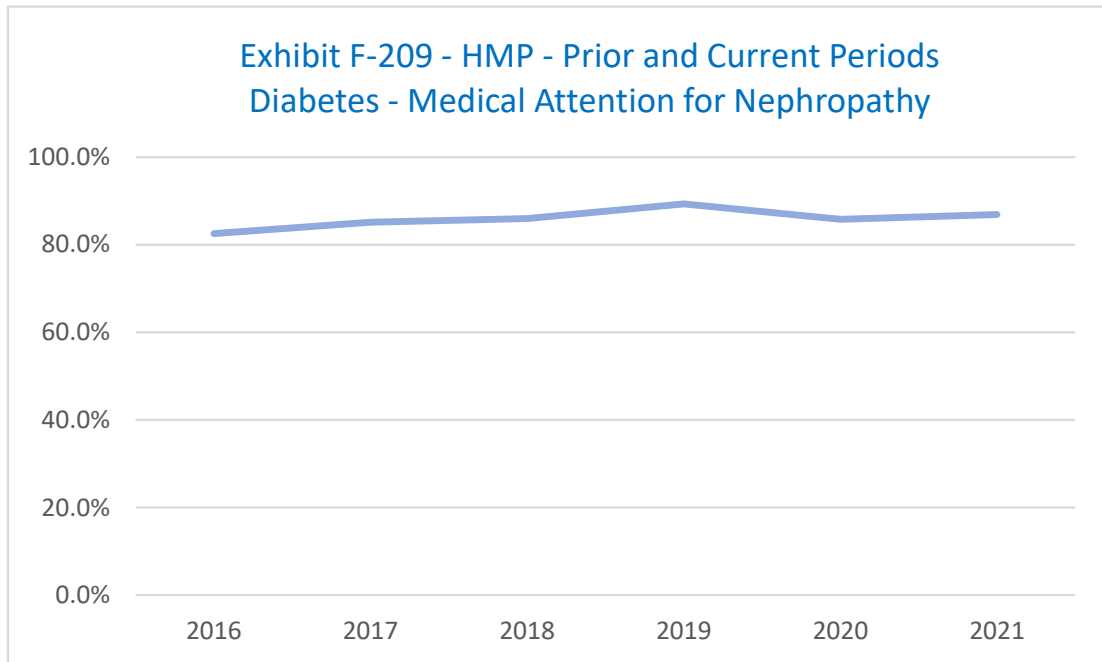
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| Compliance Rate | 82.5% | 85.1% | 86.0% | 89.3% | 85.8% | 86.9% |

## Hypertension – LDL-C Test

*Findings* – HMP Population

Approximately 63 percent of HMP members and 56 percent of comparison group members were compliant on this measure across the three years (Exhibit F-210). The compliance rate for both populations declined from 2019 to 2020 before rising again from 2020 to 2021.
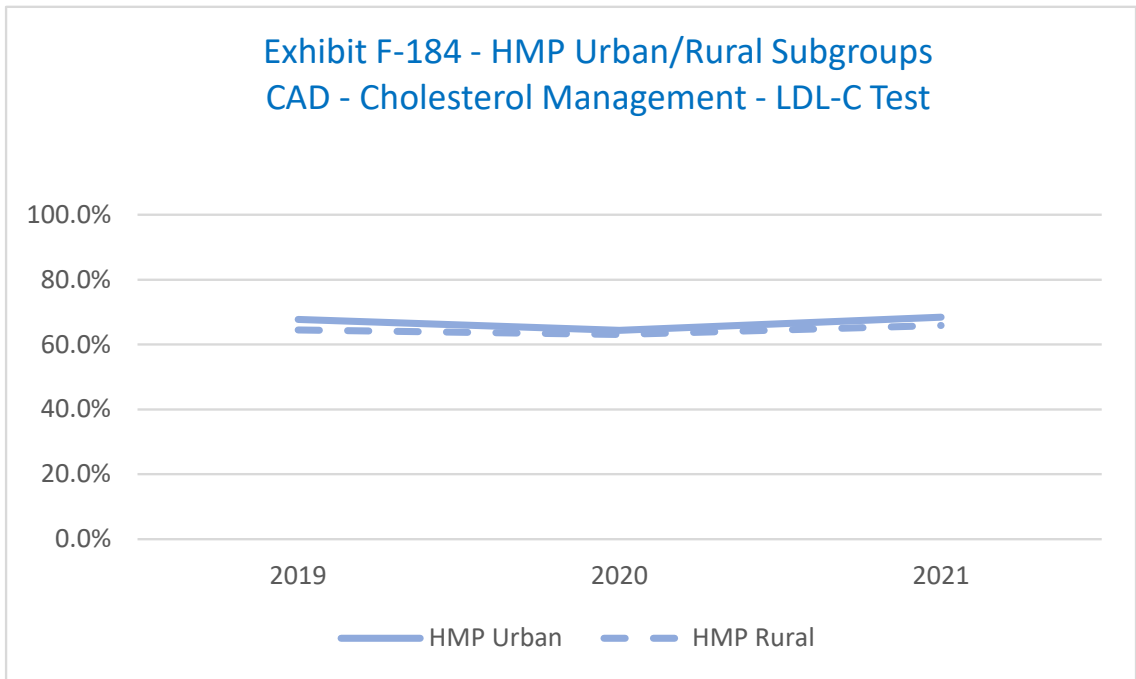


The difference between the HMP and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-211).

| Exhibit F-211 – HMP – Hypertension – LDL-C Test | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 62.0% | 61.5% | 64.4% | 62.6% |
| Comparison Group | 58.1% | 53.4% | 57.2% | 56.2% |
| Difference | 3.9%‡ | 8.1% | 7.2%‡ | 6.4%‡ |
| ‡ HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 2,596 CG – 5,920 | HMP – 3,534 CG – 7,853 | HMP – 2,857 CG – 6,555 | HMP – 8,987 CG – 20,328 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP and Care Managed Populations – Urban and Rural Subgroups

The HMP urban and rural subgroup rates were similar across the three years. The rate for the urban subgroup trended downward from 2019 to 2020 before trending upward from 2020 to 2021. The rate for the rural subgroup trended upward from 2019 to 2021 (Exhibit F-212).

**Exhibit F-212 - HMP Urban/Rural Subgroups Hypertension - LDL-C Test**
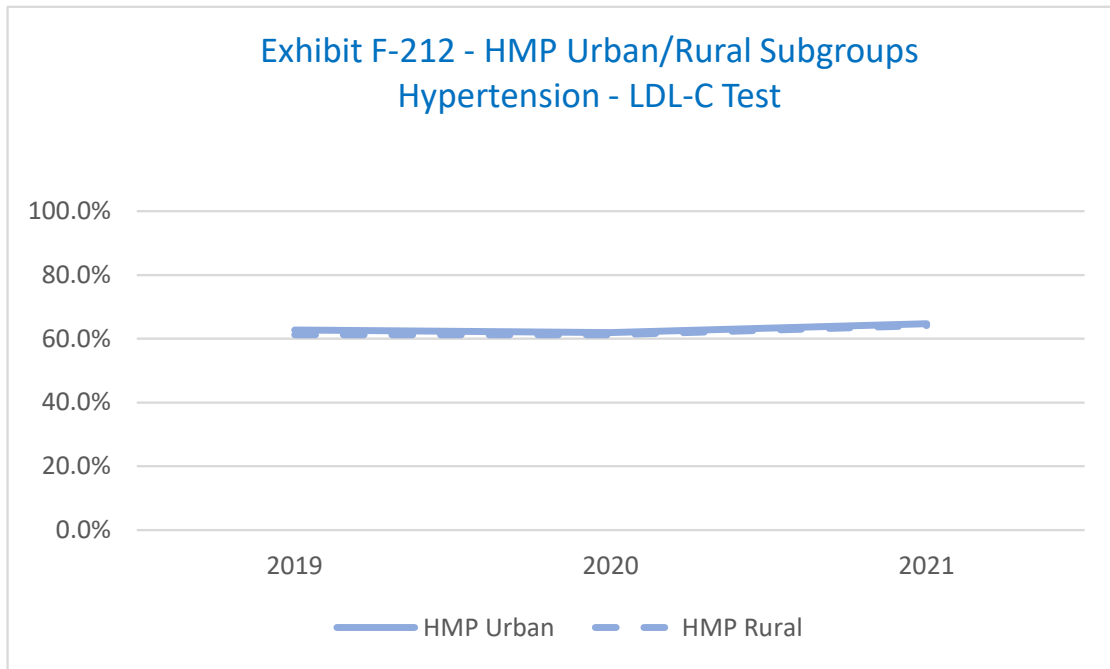


| | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Compliance Rate | **Urban** | 62.8% | 61.9% | 64.7% |
| | **Rural** | 61.3% | 61.3% | 64.1% |

*Findings* – HMP Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HMP population in the prior waiver period (2016 to 2018).  The compliance rate rose from approximately 63 percent in 2016 to 66 percent in 2017, before declining gradually over several years and rising again to 64 percent in 2021 (Exhibit F-213).

## Exhibit F-213 - HMP - Prior and Current Periods Hypertension - LDL-C Test
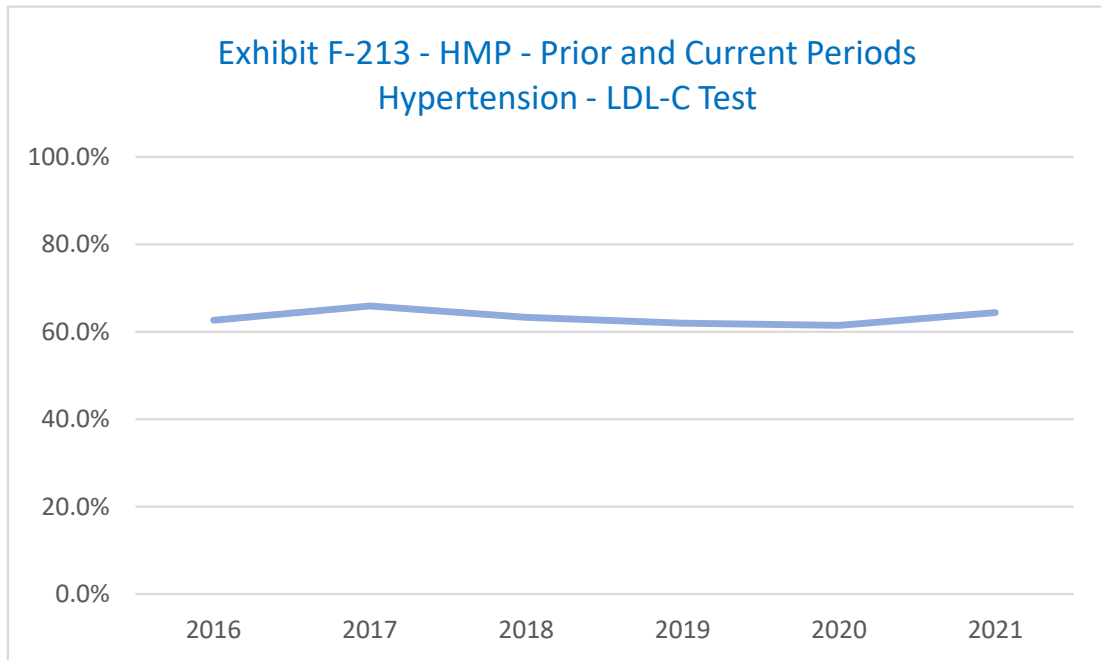
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| Compliance Rate | 62.6% | 65.9% | 63.3% | 62.0% | 61.5% | 64.4% |

## Hypertension – ACE/ARB Therapy

*Findings* – HMP Population

Approximately 67 percent of HMP members and 64 percent of comparison group members were compliant on this measure across the three years (Exhibit F-214). The compliance rate for both populations declined slightly from 2019 to 2020 before rising again from 2020 to 2021.



Exhibit F-214 - HMP
Hypertension - ACE/ARB Therapy

The difference between the HMP and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-215).

| Exhibit F-215 – HMP – Hypertension – ACE/ARB Therapy | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 67.1% | 65.5% | 67.5% | 66.7% |
| Comparison Group | 63.8% | 62.8% | 64.1% | 63.6% |
| Difference | 3.3%‡ | 2.7%‡ | 3.4%‡ | 3.1%‡ |
| ‡ HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 3,321 CG – 5,960 | HMP – 3,794 CG – 7,885 | HMP – 4,668 CG – 6,582 | HMP – 11,783 CG – 20,427 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP and Care Managed Populations – Urban and Rural Subgroups

The HMP rural subgroup rate exceeded the urban subgroup rate across the three years. The rates for both groups trended downward slightly from 2019 to 2020 before trending upward from 2020 to 2021 (Exhibit F-216).



Exhibit F-216 - HMP Urban/Rural Subgroups
Hypertension - ACE/ARB Therapy
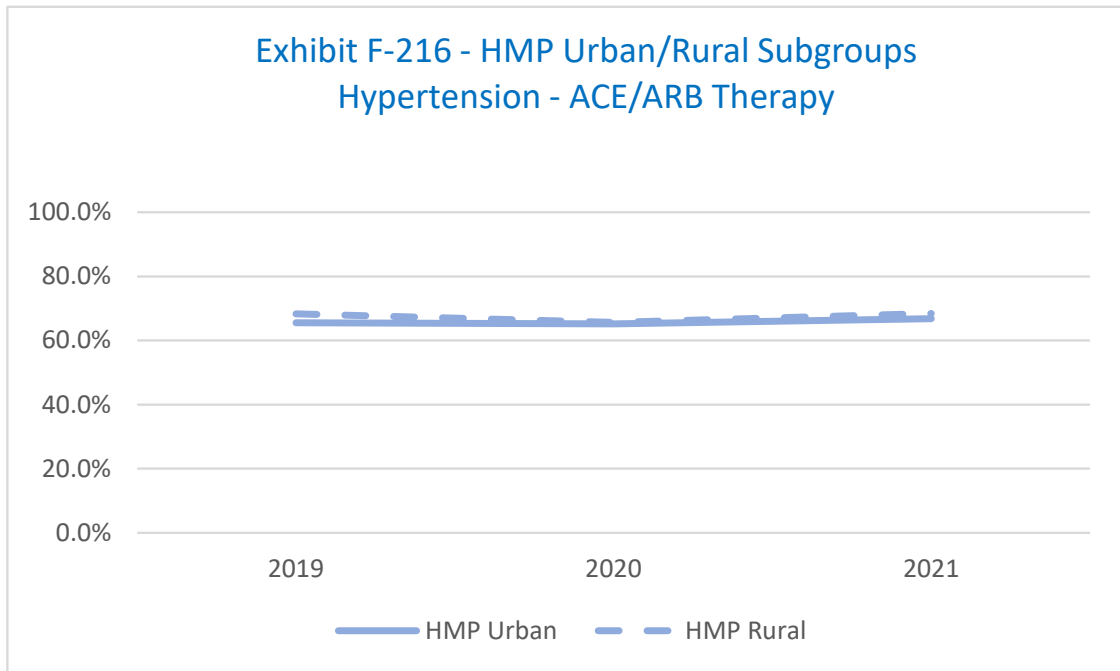
|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Compliance Rate | **Urban** | 65.5% | 65.2% | 66.8% |
|  | **Rural** | 68.3% | 65.7% | 68.4% |

*Findings* – HMP Population – Comparison to Prior Waiver Period

This measure also was evaluated for the HMP population in the prior waiver period (2016 to 2018). The compliance rate rose from approximately 62 percent in 2016 to 67 percent in 2019, before declining slightly to 66 percent in 2020 and rising again to 68 percent in 2021 (Exhibit F-217).

**Exhibit F-217 - HMP - Prior and Current Periods Hypertension - ACE/ARB Therapy**
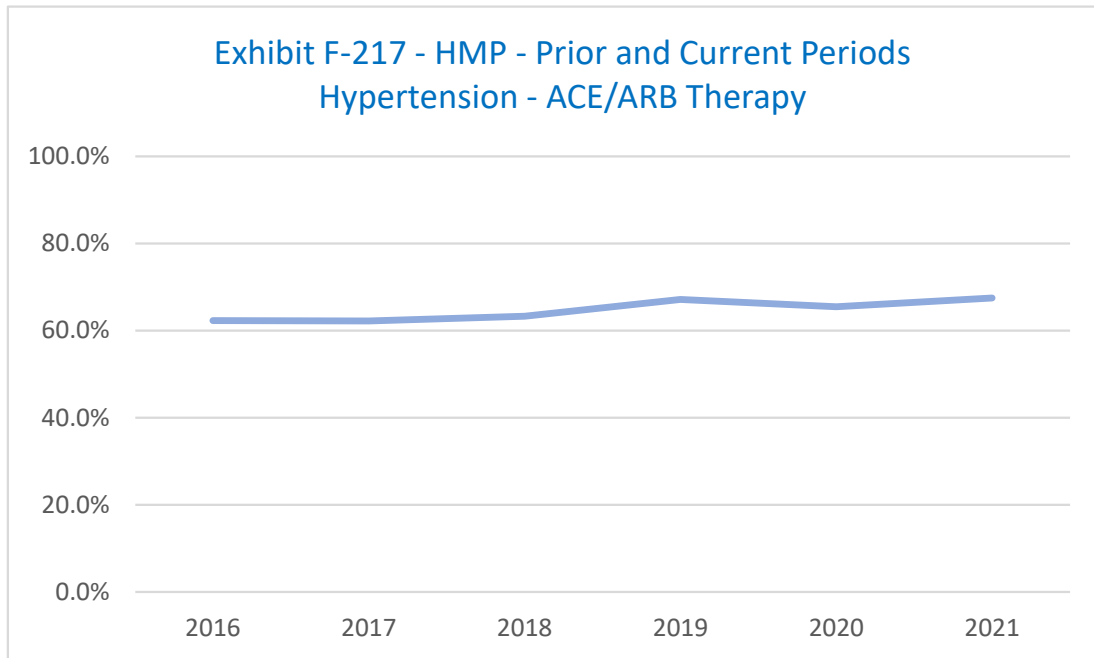


|  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| Compliance Rate | 62.3% | 62.2% | 63.3% | 67.1% | 65.5% | 67.5% |

## Opioid – Use of Opioids at High Dosage

*Findings* – HMP Population

Approximately four percent of HMP members and five percent of comparison group members were positive for this measure (users of prescription opioids at high dosage) across the three years (Exhibit F-218). The HMP population rate declined from 2019 to 2020 before rising again from 2020 to 2021. The comparison group rate declined from 2019 to 2021.



Exhibit F-218 - HMP
Opioid - Use of Opioids at High Dosage
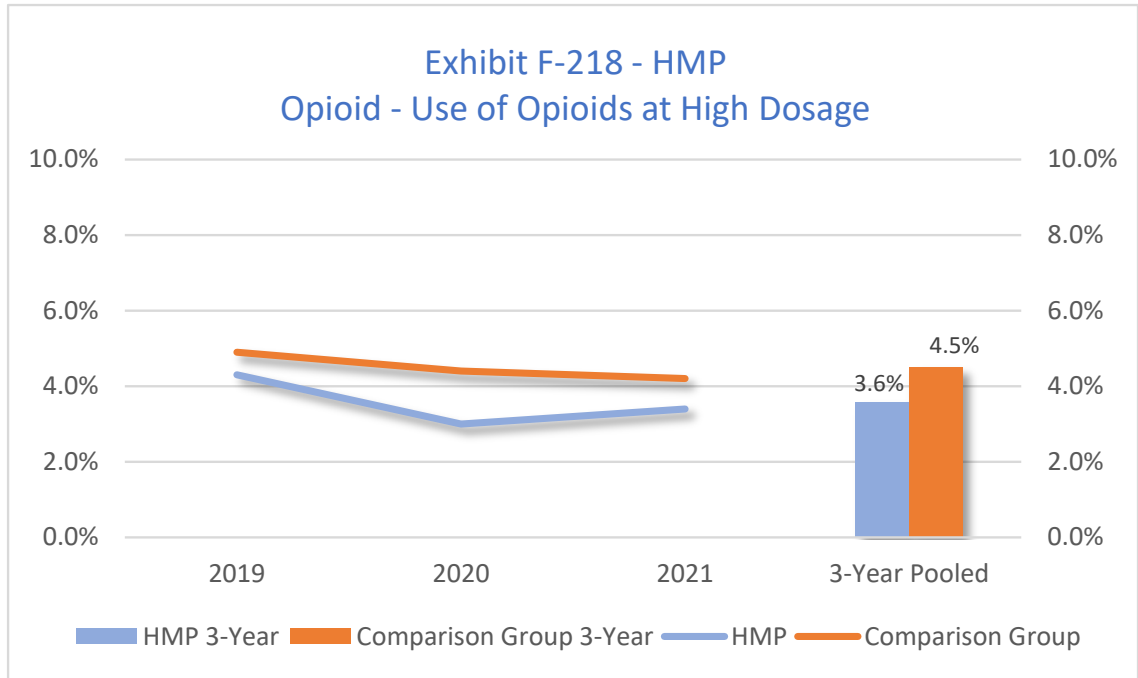
Note: Lower rate is better

The difference between the HMP and comparison group compliance rates was statistically significant in 2020. It also was statistically significant for the three-year pooled data (Exhibit F-219).

| Exhibit F-219 – HMP – Opioid – Use of Opioids at High Dosage | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 4.3% | 3.0% | 3.4% | 3.6% |
| Comparison Group | 4.9% | 4.4% | 4.2% | 4.5% |
| Difference | (0.6%) | (1.4%)‡ | (0.8%) | (0.9%)‡ |
| ‡  HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 1,094 CG – 2,890 | HMP – 1,313 CG – 2,728 | HMP – 1,127 CG – 2,436 | HMP – 3,534 CG – 8,054 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP and Care Managed Populations – Urban and Rural Subgroups

The HMP urban subgroup rate exceeded the rural subgroup rate in 2019 and 2020 and was lower than the rural subgroup rate in 2021. The rate for the urban subgroup trended downward from 2019 to 2021. The rate for the rural subgroup trended downward from 2019 to 2020 and upward from 2020 to 2021 (Exhibit F-220).

## Exhibit F-220 - HMP Urban/Rural Subgroups Opioid - Use of Opioids at High Dosage
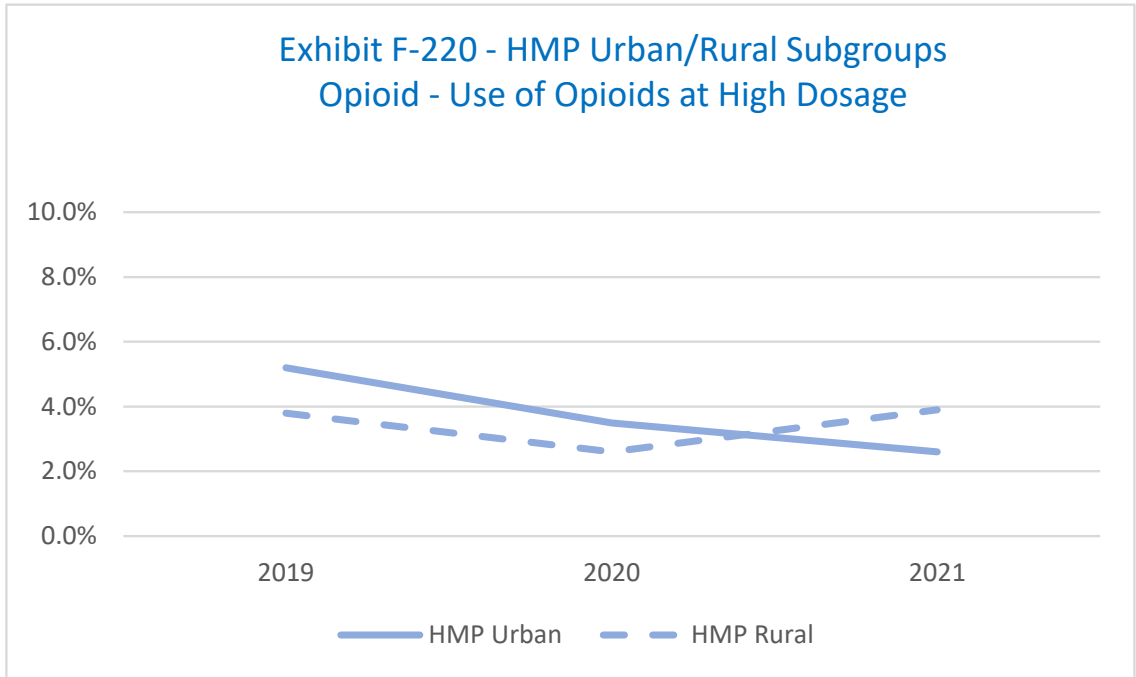


Note: Lower rate is better

| | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Compliance Rate | **Urban** | 5.2% | 3.5% | 2.6% |
| | **Rural** | 3.8% | 2.6% | 3.9% |

*Findings* – HMP and National Benchmark

The three-year pooled rate for the SoonerCare HMP population was 33 percentage points lower than the national benchmark rate (Exhibit F-221).

(Caution: the benchmark population characteristics were not matched to the OHCA groups to minimize differences in the populations. The data is presented for informational purposes only.)

## Exhibit F-221 - HMP versus Benchmark Opioid - Use of Opioids at High Dosage
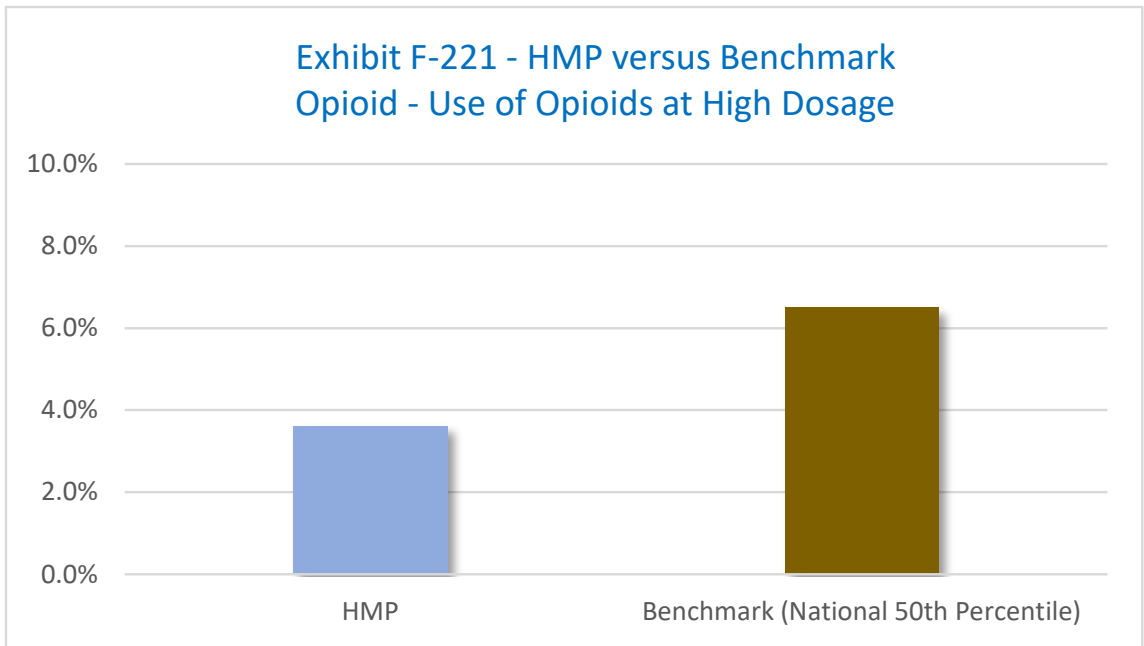


Note: Lower rate is better

|  | HMP | Benchmark |
|---|---|---|
| Compliance Rate | 3.6% | 6.5% |

## Opioid – Concurrent Use of Opioids and Benzodiazepines

*Findings* – HMP Population

Approximately 11 percent of HMP members and 13 percent of comparison group members were positive for this measure (concurrent users of prescription opioids and benzodiazepines) across the three years (Exhibit F-222). The HMP population rate declined from 2019 to 2020 before rising again from 2020 to 2021. The comparison group rate declined from 2019 to 2021.
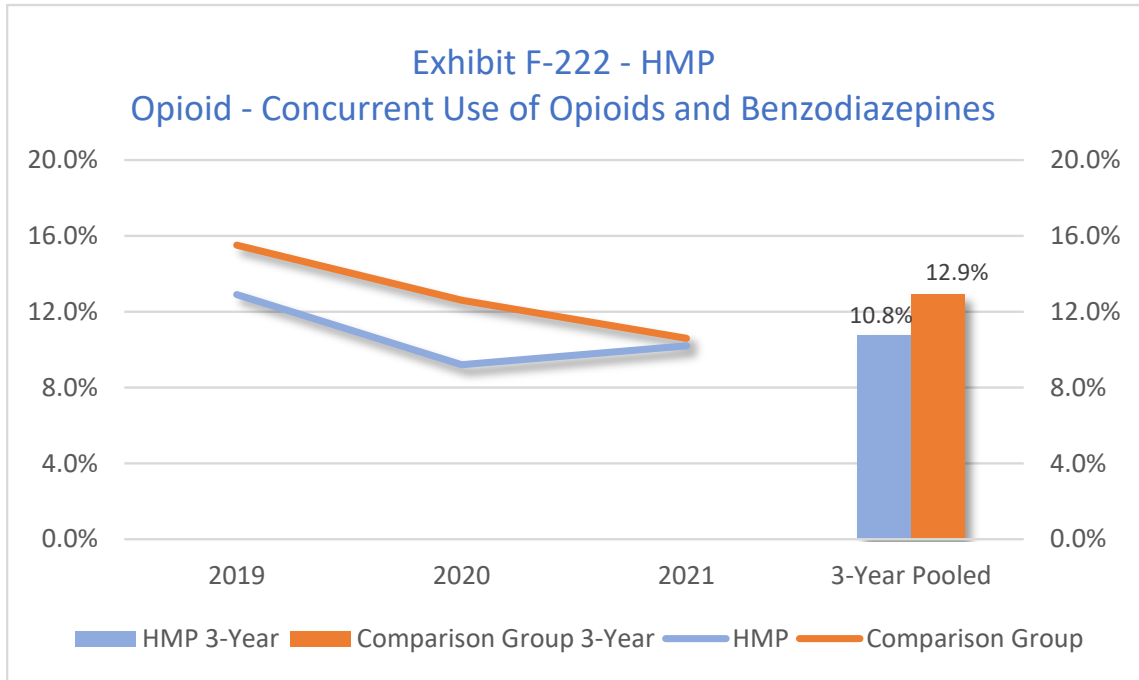


Note: Lower rate is better

The difference between the HMP and comparison group compliance rates was statistically significant in 2019 and 2020. It also was statistically significant for the three-year pooled data (Exhibit F-223).

| Exhibit F-223 – HMP – Opioid – Concurrent Use of Opioids and Benzodiazepines | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 12.9% | 9.2% | 10.2% | 10.8% |
| Comparison Group | 15.5% | 12.6% | 10.6% | 12.9% |
| Difference | (2.6%)‡ | (3.4%)‡ | (0.4%) | (2.1%)‡ |
| ‡  HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 1,390 CG – 4,037 | HMP – 1,756 CG – 3,873 | HMP – 1,520 CG – 3,624 | HMP – 4,666 CG – 11,534 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP and Care Managed Populations – Urban and Rural Subgroups

The HMP rural subgroup rate exceeded the urban subgroup rate across all three years. The rate for the rural subgroup trended downward from 2019 to 2020 and was stable from 2020 to 2021. The rate for the urban subgroup trended downward from 2019 to 2020 and upward from 2020 to 2021 (Exhibit F-224).



**Exhibit F-224 - HMP Urban/Rural Subgroups
Opioid - Concurrent Use of Opioids and Benzodiazepines**

Note: Lower rate is better

| | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| **Compliance Rate** | **Urban** | 9.9% | 6.8% | 9.0% |
| | **Rural** | 14.5% | 11.0% | 11.1% |

## HMP Quality of Care – Social Determinants of Health

PHPG attempts to conduct a telephone survey with all SoonerCare HMP members at time of enrollment (baseline) and again six months later (follow-up). The survey includes questions concerning social determinants of health (SDOH). PHPG conducted 1,936 baseline surveys and 923 follow-up surveys from 2019 to 2021. Both surveys inquired about awareness of available assistance with SDOH through the SoonerCare HMP, use rates among those aware and satisfaction among those receiving assistance (asked in terms of how helpful the assistance was). Appendix 8 contains a copy of the survey instrument SDOH section.

### Findings – Awareness and Use of SDOH Assistance

Fifty-six percent of baseline respondents and sixty-five percent of follow-up respondents were aware that the SoonerCare HMP offers assistance with SDOH, either through the member's health coach or a SoonerCare HMP Community Resource Specialist.  Among those aware, 17 percent of baseline respondents reported receiving assistance from their Health Coach and/or a SoonerCare HMP Community Resource Specialist; 14 percent of follow-up respondents reported receiving assistance in the preceding six months.

Respondents reported receiving assistance with a variety of SDOH-related needs (multiple responses per member were permitted). The most common areas cited were help resolving food insecurity, housing/rent and transportation (Exhibit F-225)[69].



Exhibit F-225 - HMP
SDOH - Areas of Assistance

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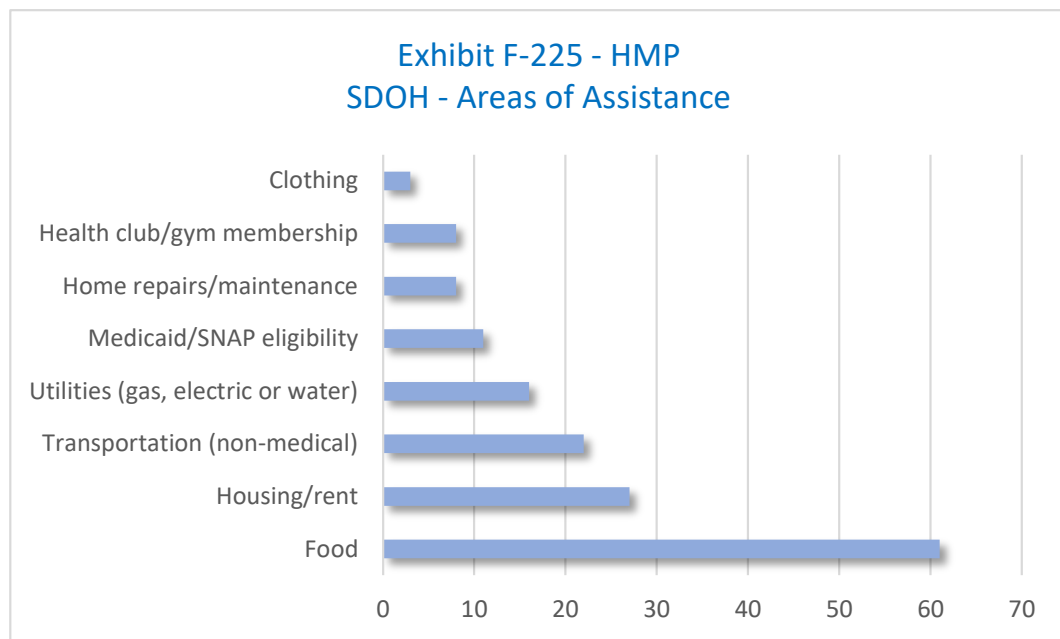
[69] Areas mentioned by fewer than three respondents not shown on chart.

*Findings* – Satisfaction (Helpfulness)

Respondents were asked to rate the helpfulness of the assistance they received. Ninety-three percent rated it as very or somewhat helpful (Exhibit F-226).
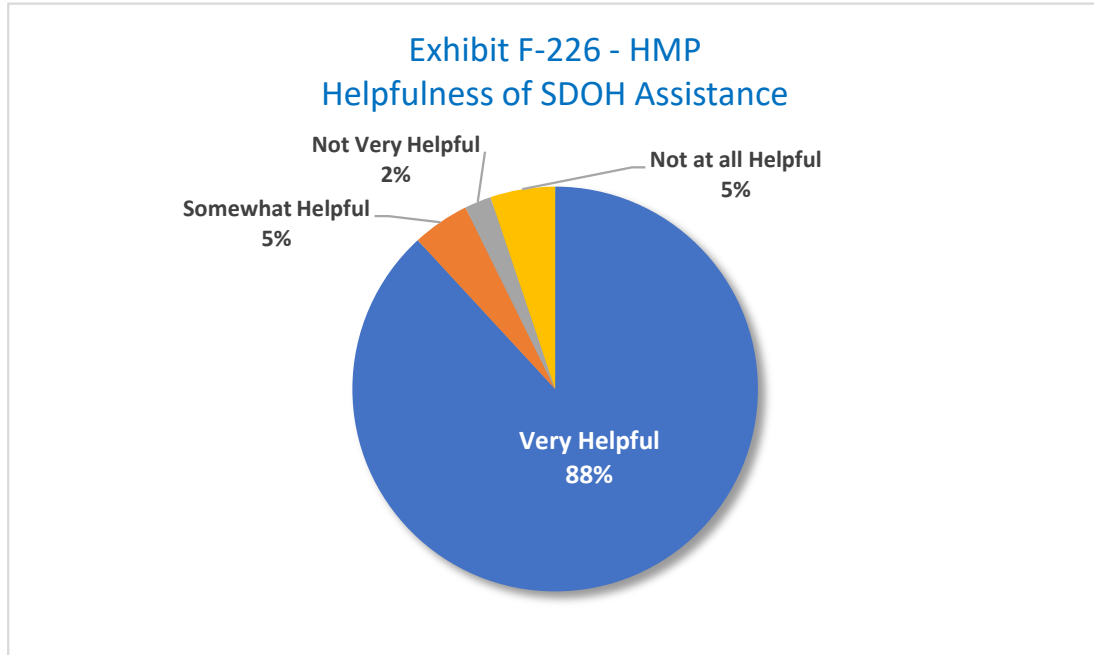


Exhibit F-226 - HMP
Helpfulness of SDOH Assistance

In addition to providing responses to the structured survey questions, respondents were invited to describe their experience in their own words. A representative sample of respondent comments is provided below.

> *"(My health coach) has helped me so much, especially during COVID. I'm a single mom of three and can't always afford food; she sent me information on food pantries and helped me get my medications approved."*

> *"(My health coach) filled out and sent in my HUD application for me. I am computer illiterate so she just did it herself and I am so thankful."*

> *"SoonerCare only gives six punches of prescriptions a month and I have more than that. I was doing without some of my meds until my health coach set me up on 90-day supplies, now I get all of them! She also helped me write up a budget to help me keep track of my money."*

> *"I am computer illiterate. My nurse prints out helpful things for my health and sends them to me. She also helped get me dentures and glasses."*

> *"(My health coach) helped me at my lowest point in life. He never rushes me and I can tell he truly cares. He has helped me track down my medical records for a specialist. I have memory issues and he has been such a help. I told the other health coach that called that I am putting (my regular health coach) in my will!"*

*"(My health coach) not only helped me get glasses and stop smoking but she is so easy to talk to.  She is always upbeat and happy.  I can text her, call her or email her and she always answers quickly."*

*"The lady who calls has literally saved my life.  If I didn't have her to talk to, I probably would have killed myself by now.  She is helping me get section 8 housing and transportation.  She also had my medication delivered to me when I could not get to the pharmacy and was panicking.  She is an angel."*

## Getting Needed Care – Children and Adults

*Findings* – HMP Population

Approximately 77 percent of HMP adult members and 86 percent of comparison group adult members reported always or usually being able to get needed care[70]. Approximately 86 percent of parents/caretakers of HAN child members and 88 percent of comparison group parents/caretakers reported always or usually being able to get needed care for their children (Exhibit F-227).
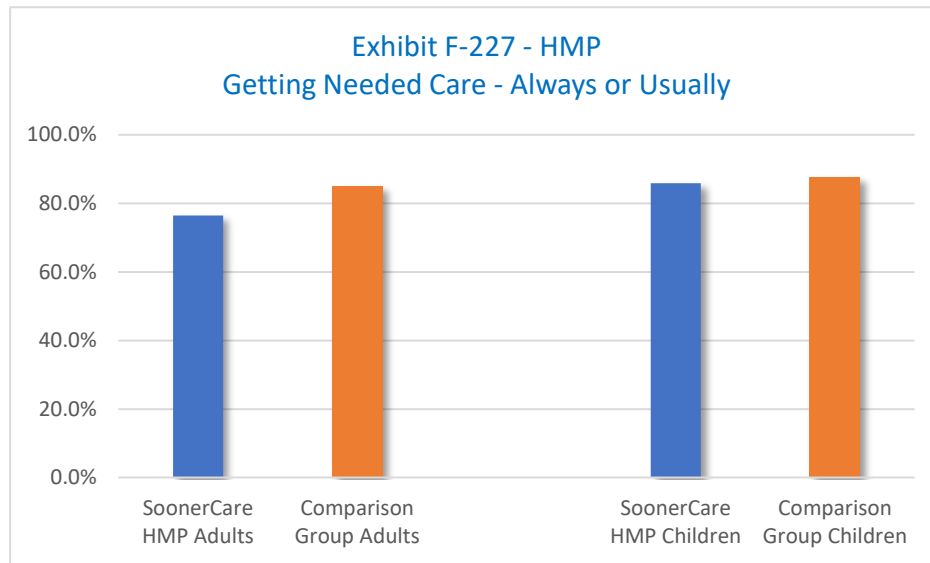


Exhibit F-227 - HMP
Getting Needed Care - Always or Usually

The difference between the HMP and comparison group compliance rates was statistically significant for adults (Exhibit F-228).

| Exhibit F-228 – HMP – Getting Needed Care – Percent Responding Always or Usually | | |
|---|---|---|
| | Adults | Children |
| HMP | 76.5% | 85.9% |
| Comparison Group | 85.1% | 87.8% |
| Difference | (8.6%)‡ | (1.9%) |
| ‡ HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | |
| Sample Sizes | Adults | HMP - 591 CG – 213 | Parents/Caretakers of Children | HMP - 77 CG – 668 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | |

[70] CAHPS question: In the last six months, how often was it easy to get the care, tests or treatment you (your child) needed?

*Findings* – HMP Population and National Benchmark

The 2021 national benchmark rate for adults exceeded the rate for SoonerCare HMP by approximately eight percentage points (Exhibit F-229).

The rate for SoonerCare HMP children exceeded the 2021 national benchmark rate by less than one percentage point.

(Caution: the benchmark population characteristics were not matched to the OHCA groups to minimize differences in the populations. The data is presented for informational purposes only.)



Exhibit F-229 - HMP - Total versus Benchmark
Getting Needed Care - Always or Usually
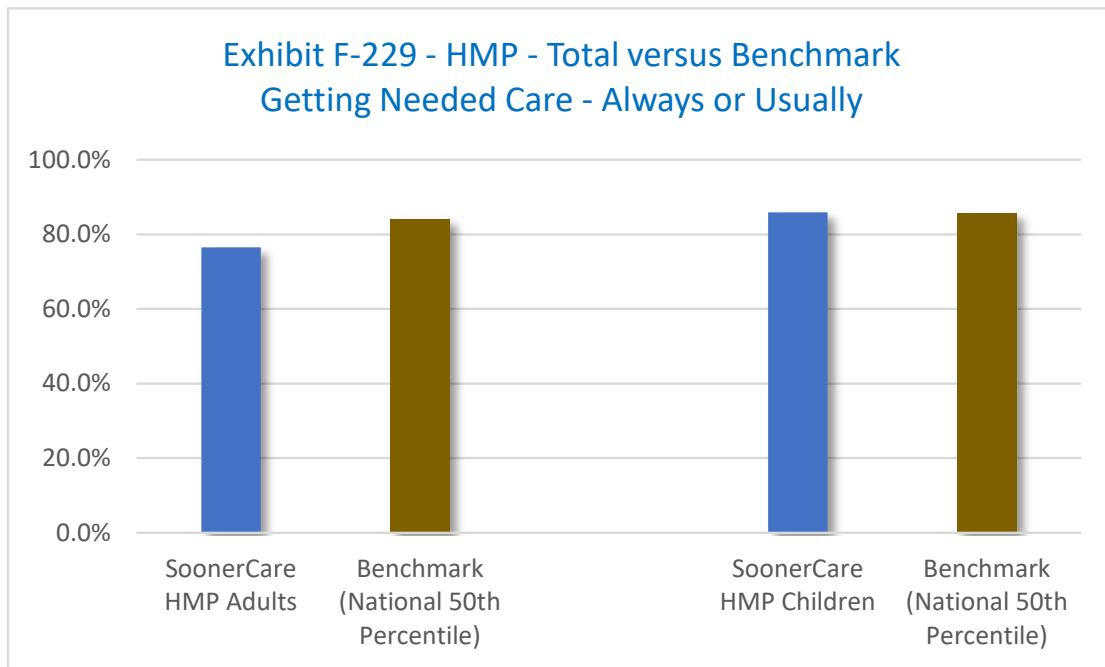
|  | HMP Adult | Benchmark | HMP Child | Benchmark |
|---|---|---|---|---|
| Response | 76.5% | 84.1% | 85.9% | 85.7% |

## Rating of Health Care – Children and Adults

*Findings* – HMP Population

Approximately 72 percent of both HMP adult and comparison group members rated their health care as 8, 9 or 10 on a scale of 0 (worst health care possible) to 10 (best health care possible)[71]. Approximately 86 percent of parents/caretakers of HMP child members and 85 percent of comparison group parents/caretakers rated their health care as 8, 9 or 10 (Exhibit F-230).
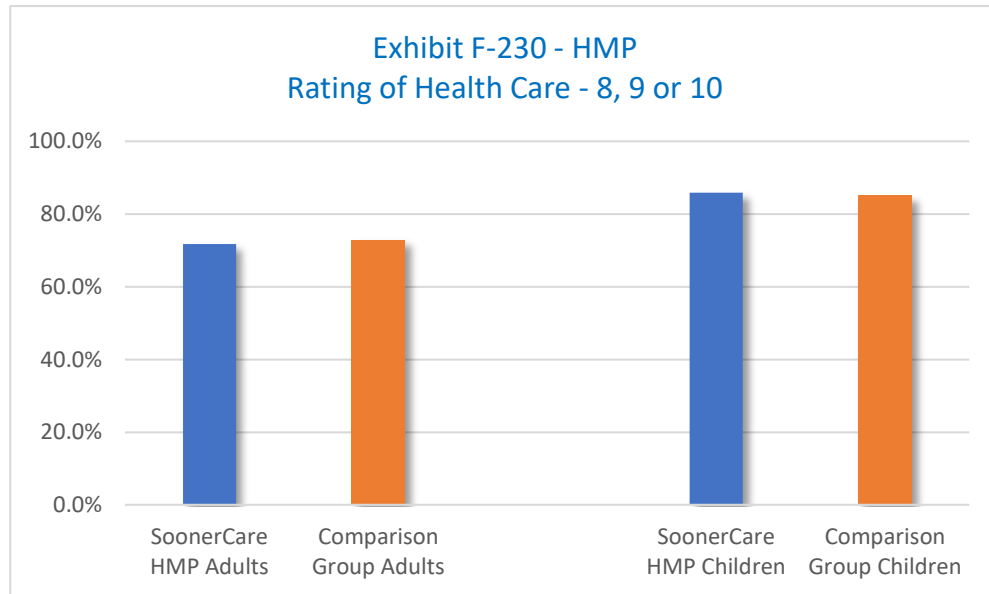


Exhibit F-230 - HMP
Rating of Health Care - 8, 9 or 10

The difference between the HMP and comparison group compliance rates was not statistically significant for either group (Exhibit F-231).

| Exhibit F-231 – HMP – Rating of Health Care– Percent Rating 8, 9 or 10 | | |
|---|---|---|
| | Adults | Children |
| HMP | 71.8% | 85.9%[72] |
| Comparison Group | 72.8% | 85.1% |
| Difference | (1.0%) | 0.8% |
| ‡   HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | |

| Sample Sizes | Adults | HMP - 591 CG – 213 | Parents/Caretakers of Children | HMP - 77 CG – 668 |
|---|---|---|---|---|
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

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[71] CAHPS question: Using any number from 0 to 10, where 0 is the worst health care possible and 10 is the best health care possible, what number would you use to rate all your (your child's) health care in the last six months?

[72] Percentage for HMP children on this measure coincidentally matches percentage on previous measure.

*Findings* – HMP Population and National Benchmark

The 2021 national benchmark rate for adults exceeded the SoonerCare HMP adult rate by approximately six percentage points (Exhibit F-232).

The 2021 national benchmark rate for children exceeded the SoonerCare HMP children rate by approximately three percentage points.

(Caution: the benchmark population characteristics were not matched to the OHCA groups to minimize differences in the populations. The data is presented for informational purposes only.)



Exhibit F-232 - HMP versus Benchmark
Rating of Health Care - 8, 9 or 10
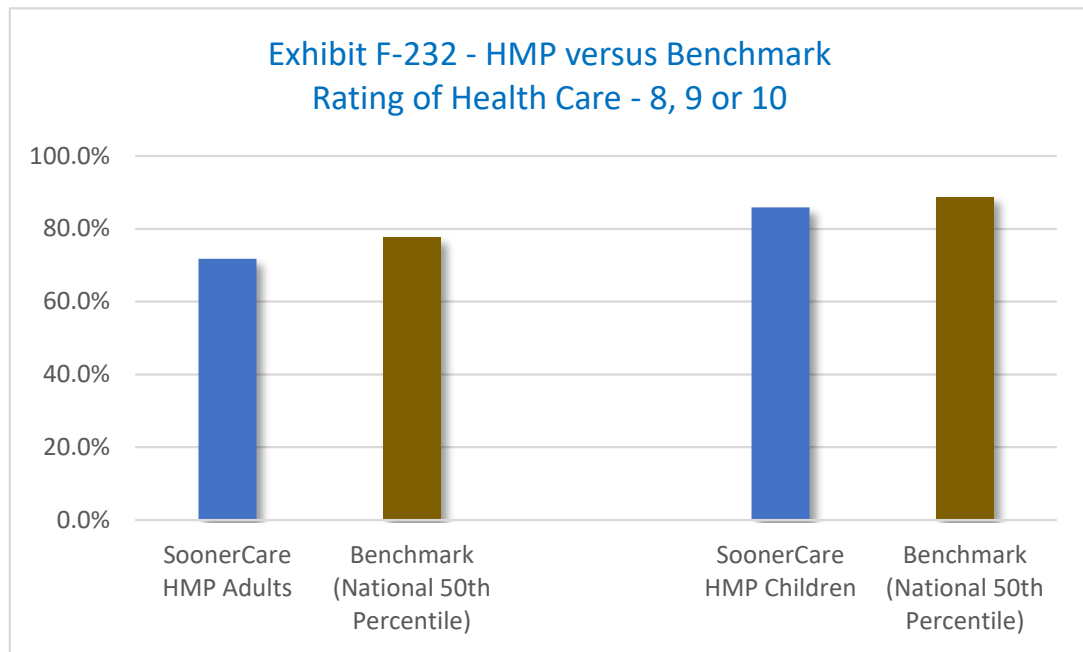
|  | HMP Adult | Benchmark | HMP Child | Benchmark |
|---|---|---|---|---|
| Response | 71.8% | 77.7% | 85.9% | 88.8% |

## Rating of Health Plan – Children and Adults

*Findings* – HMP Population

Approximately 82 percent of HMP adult members and approximately 71 percent of comparison group adult members rated their health plan (SoonerCare) as 8, 9 or 10 on a scale of 0 (worst health plan possible) to 10 (best health plan possible)[73].  Approximately 82 percent of parents/caretakers of HMP child members and approximately 81 percent of comparison group parents/caretakers rated their health plan as 8, 9 or 10 (Exhibit F-233).



Exhibit F-233 - HMP
Rating of Health Plan - 8, 9 or 10
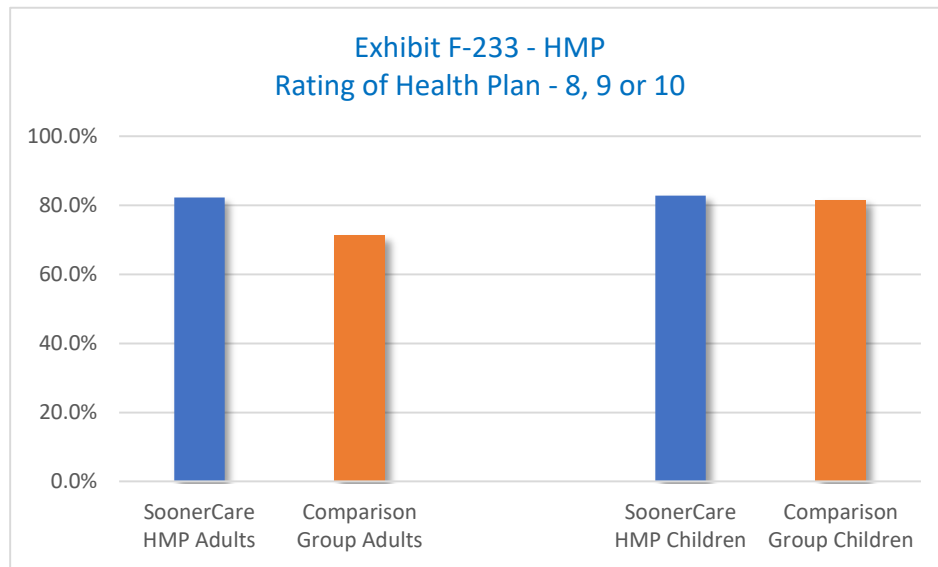
The difference between the adult HMP total and comparison group compliance rates was statistically significant (Exhibit F-234).

| Exhibit F-234 – HMP – Rating of Health Plan – Percent Rating 8, 9 or 10 | | |
|---|---|---|
| | Adults | Children |
| HMP | 82.3% | 82.8% |
| Comparison Group | 71.3% | 81.6% |
| Difference | 11.0%‡ | 1.2% |
| ‡  HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | |

| Sample Sizes | Adults | HMP - 591 CG – 213 | Parents/Caretakers of Children | HMP - 77 CG – 668 |
|---|---|---|---|---|

| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

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[73] CAHPS question: Using any number from 0 to 10, where 0 is the worst health plan possible and 10 is the best health plan possible, what number would you use to rate your (your child's) health plan?

*Findings* – HMP Population and National Benchmark

The rate for SoonerCare HMP adults exceeded the 2021 national benchmark rate by approximately four percentage points (Exhibit F-235).

The 2021 national benchmark rate for children exceeded the SoonerCare HMP children rate by approximately four percentage points.

(Caution: the benchmark population characteristics were not matched to the OHCA groups to minimize differences in the populations. The data is presented for informational purposes only.)



Exhibit F-235 - HMP versus Benchmark
Rating of Health Plan - 8, 9 or 10
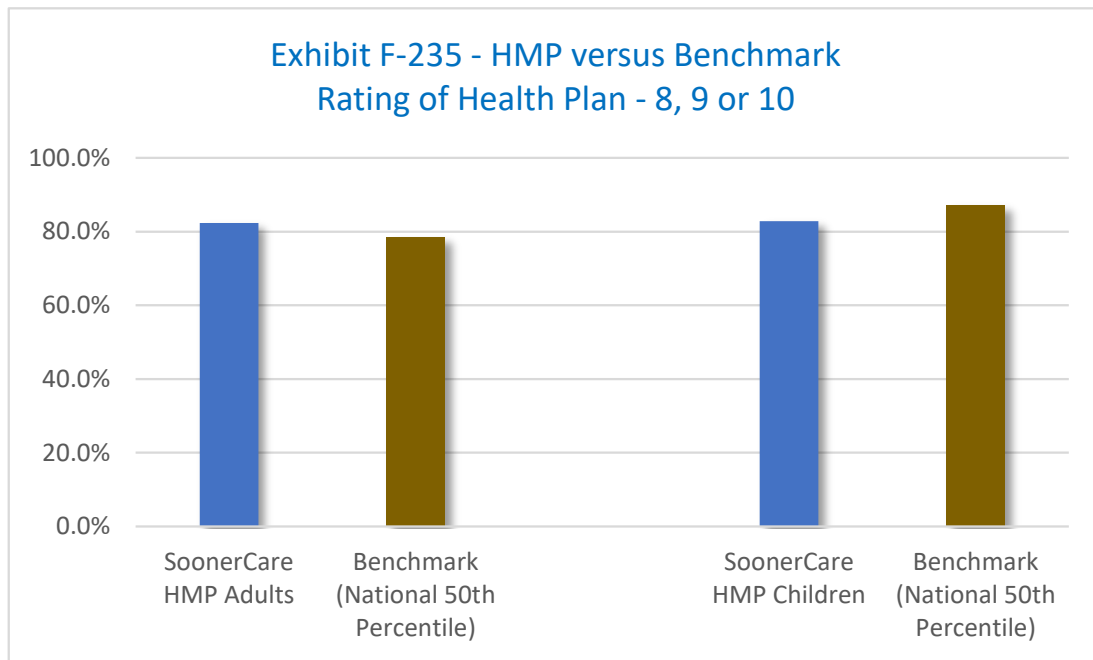
|  | HMP Adult | Benchmark | HMP Child | Benchmark |
|---|---|---|---|---|
| Response | 82.3% | 78.6% | 82.8% | 87.2% |

## HMP Quality of Care – Summary

The SoonerCare HMP and comparison group populations differed by a statistically significant amount on 12 of 15 HEDIS or HEDIS-like quality-of-care measures, with the HMP population outperforming the comparison group on 11 measures and the comparison group outperforming the HAN total population on one. Eleven of the measures trended in a positive direction and four trended in a negative direction. (The measure set included two opioid measures for which a downward trend was positive.)

The SoonerCare HMP and comparison group populations differed by a statistically significant amount on two of six CAHPS measures, with the SoonerCare HMP and comparison group each outperforming the other on one measure apiece (Exhibit F-236). (See bottom of exhibit for legend.)

### *Exhibit F-236 – HMP Quality of Care Measures – Summary*

| Measures | HMP versus Comparison Group | HMP 2019 – 2021 Trend |
|---|:---:|:---:|
| Average number of chronic conditions | *Qualitative Measure* | |
| Physical/behavioral health co-morbidities | *Qualitative Measure* | |
| Asthma – Medication Ratio – Ages 5 to 18 | ✦ | ▲ |
| Asthma – Medication Ratio – Ages 19 to 64 | ✦ | ▲ |
| Cardiovascular – Persistence of Beta Blocker Treatment after a Heart Attack | ✦ | ▲ |
| Cardiovascular – LDL-C Test | ✦ | ▲ |
| COPD – Use of Spirometry Testing | ✦ | ▼ |
| COPD – Pharmacotherapy Management of COPD Exacerbation – 14 Days | ✦ | ▼ |
| COPD – Pharmacotherapy Management of COPD Exacerbation – 30 Days | ✦ | ▲ |

| Measures | HMP versus Comparison Group | HMP 2019 – 2021 Trend |
|---|:---:|:---:|
| Diabetes – Percentage of Members who had LDL-C Test | ✦ | ▲ |
| Diabetes – Percentage of Members who had Retinal Eye Exam Performed | ✦ | ▲ |
| Diabetes – Percentage of Members who had HbA1c Testing | ✦ | ▼ |
| Diabetes – Percentage who Received Medical Attention for Nephropathy | ✦ | ▼ |
| Hypertension – Percentage of Members who had LDL-C Test | ✦ | ▲ |
| Hypertension – Percentage of Members Prescribed ACE/ARB Therapy | ✦ | ▲ |
| Opioids – Use of Opioids at High Dosage | ✦ | ▼ |
| Opioids – Concurrent Use of Opioids and Benzodiazepines | ✦ | ▼ |
| SDOH Assistance | *Qualitative Measure* | |
| Getting Needed Health Care – Adults | ✦ | |
| Getting Needed Health Care - Children | ✦ | |
| Rating of Health Care – Adults | ✦ | |
| Rating of Health Care – Children | ✦ | |
| Rating of Health Plan – Adults | ✦ | |

| Measures | HMP versus Comparison Group | HMP 2019 – 2021 Trend |
|---|---|---|
| **Rating of Health Plan – Children** | ✦ | |

✦ HMP exceeds comparison group by a statistically significant amount (3-year pooled)

✦ No statistically significant difference (3-year pooled)

✦ Comparison group exceeds HMP by a statistically significant amount (3-year pooled)

▲ 2019 – 2021 trend is upward / ▼ trend is downward (opioid measures)

▼ 2019 – 2021 trend is downward (non-opioid measures)
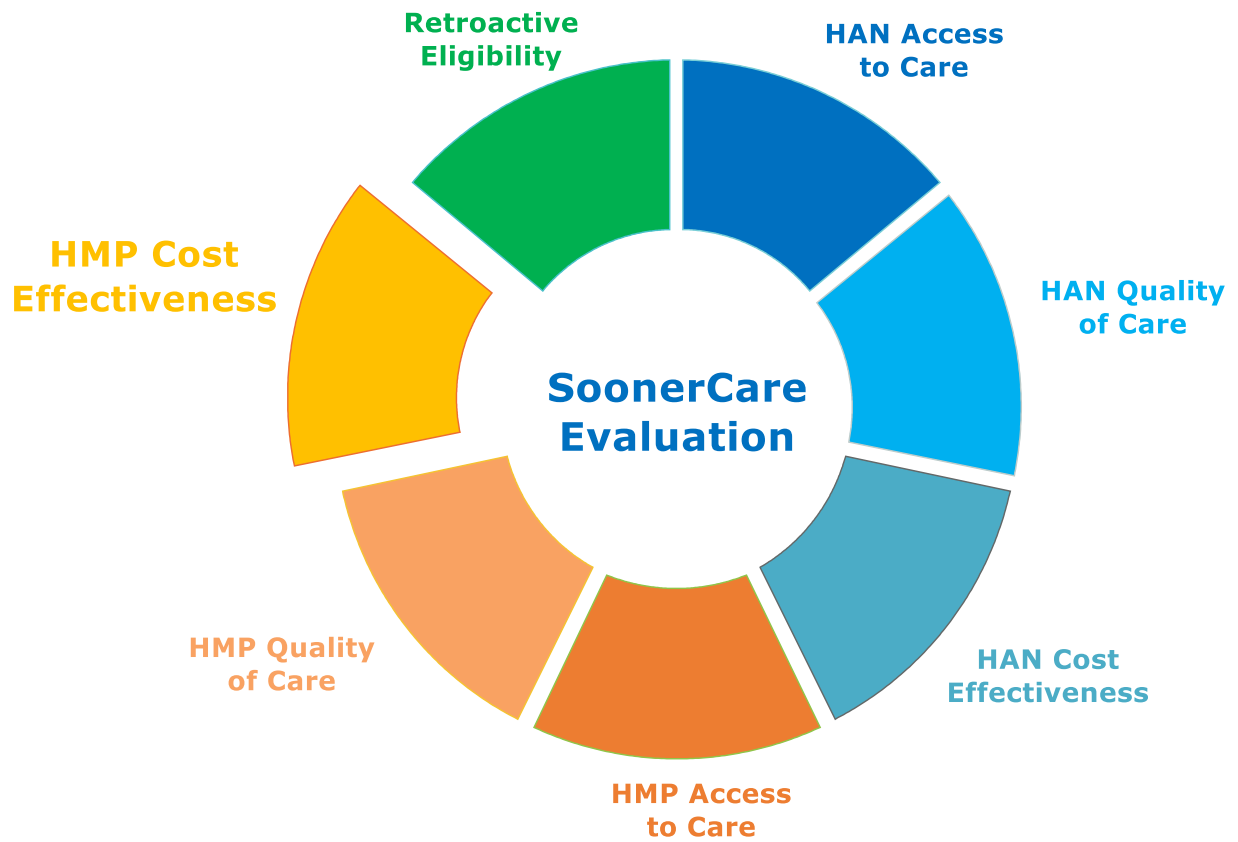
## 6. *HMP Cost Effectiveness*

### Overview

SoonerCare HMP activities related to improving access and quality, if effective, should have an observable impact on beneficiary service utilization and expenditures. Improvement in quality of care should yield better outcomes in the form of fewer emergency room visits and hospitalizations, and lower acute care costs.

### HMP Cost Effectiveness Measures

Exhibit F-237 on the following page presents the HMP cost effectiveness measures and identifies:

- Data sources
- Subgroups evaluated (if any)
- Presence or absence of a national benchmark
- Presence or absence of comparative data from the prior Demonstration period

### Supporting Appendices

Appendix 10 contains CEM covariate balance tables for utilization and expenditure measures. Appendix 11 contains statistical significance test results for utilization and expenditure measures.

*Exhibit F-237 - HMP Cost Effectiveness Measures - Overview*

| Measures | Source | Geographic Subgroups | National Benchmark | Prior Period Data[74] |
|---|---|---|---|---|
| **Emergency Room Utilization** Emergency room visits per 1,000 member months. | MMIS (claims) | *Yes* | No | No |
| **Hospital Admissions** Acute care hospital admissions per 100,000 member months. | MMIS (claims) | *Yes* | No | No |
| **Hospital Readmissions** Acute care hospital 30-day readmission rate (all causes). | MMIS (claims) | *Yes* | No | No |
| **PMPM Expenditures** Average per member per month expenditures (all services). | MMIS (claims) | *Yes* | No | No |

Methodology detail and sample sizes also are included at the bottom of exhibits containing the results of statistical significance tests between treatment (Demonstration) and comparison group populations.

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[74] The member acuity component of the matching criteria used for selection of a comparison group was modified from the prior evaluation period, to better align HMP and comparison group populations. PHPG determined it would be inappropriate to show a six-year trend line. (The trends in all cases are favorable as compared to the 2016 - 2018 period, but the degree of change suggests that at least a portion of the improvement is due to the refined matching method.)

## Emergency Room Visits per 1,000 Member Months

*Findings* – HMP Population

HMP members averaged approximately 148 emergency room visits per 1,000 member months and comparison group members averaged 168 visits per 1,000 member months across the three years (Exhibit F-238). The visit rate for both populations declined from 2019 to 2021.



Exhibit F-238 - HMP
Emergency Room Visits per 1,000 Member Months

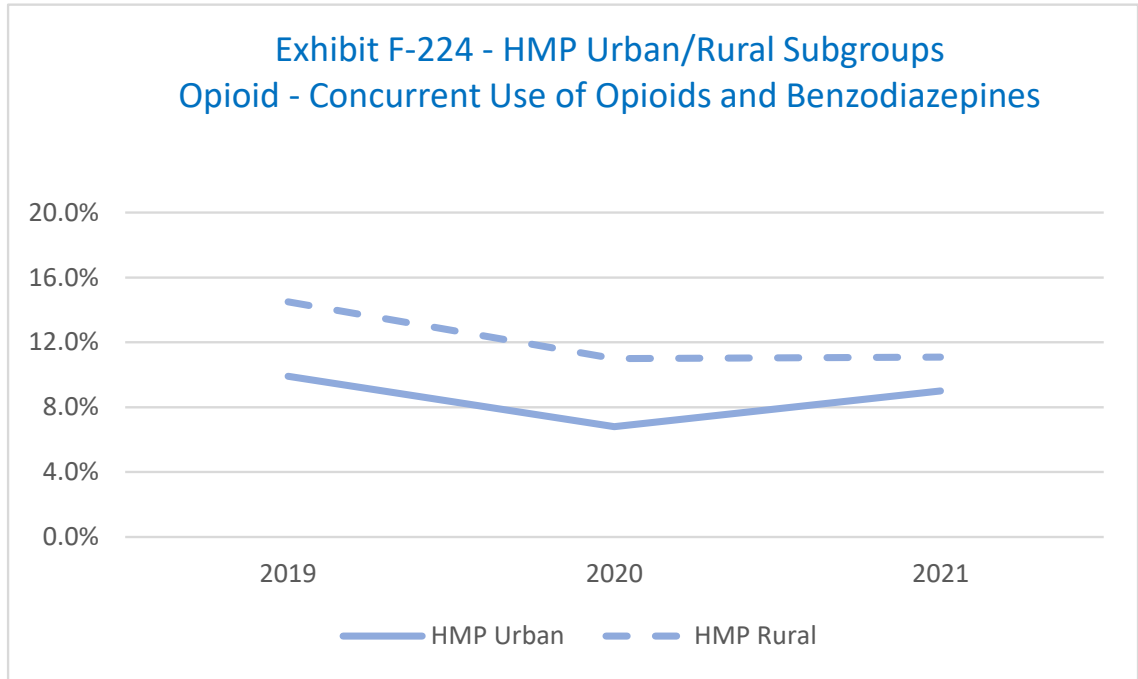Note: Lower rate is better

The difference between the HMP and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-239).

| Exhibit F-239 – HMP – Emergency Room Visits per 1,000 Member Months | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 162.7 | 142.4 | 137.5 | 147.5 |
| Comparison Group | 186.8 | 158.9 | 158.0 | 167.9 |
| Difference | (24.1)‡ | (16.5)‡ | (20.5%)‡ | (20.4)‡ |
| ‡ HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 2,775 CG – 10,444 | HMP – 4,413 CG – 10,926 | HMP – 4,147 CG – 16,895 | HMP – 11,335 CG – 38,265 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP Population – Urban and Rural Subgroups

The HMP urban subgroup rate exceeded the rural subgroup rate across the three years. The rate for both subgroups rate declined from 2019 to 2021 (Exhibit F-240).

**Exhibit F-240 - HMP - Urban/Rural Subgroups Emergency Room Visits per 1,000 Member Months**
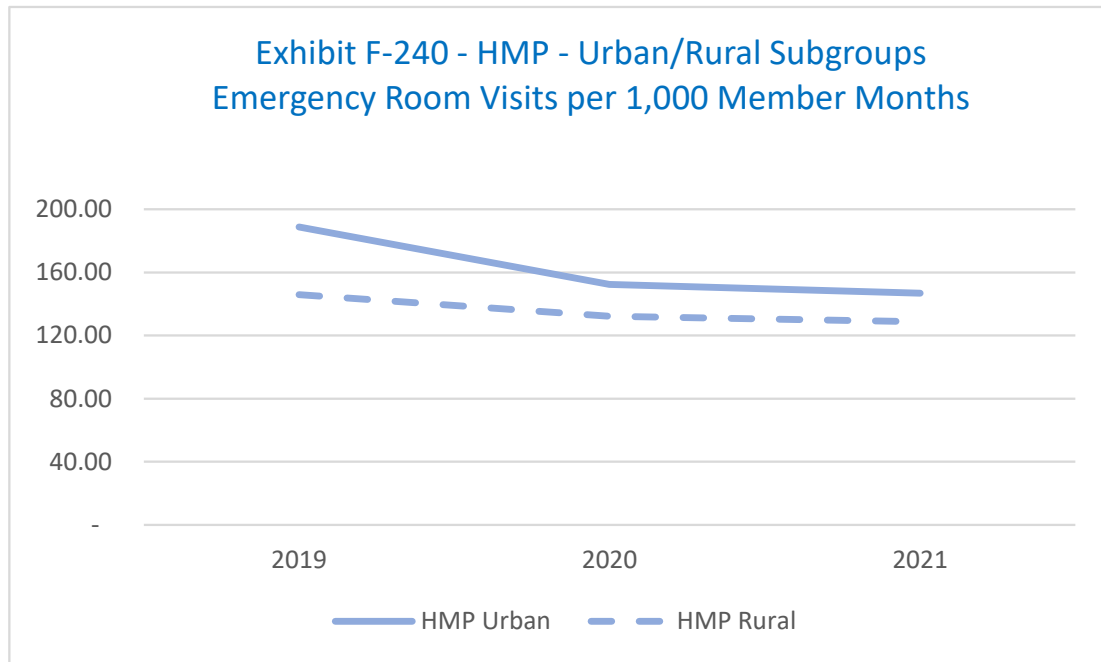


| | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Visit Rate | **Urban** | 188.7 | 152.5 | 146.8 |
| | **Rural** | 145.9 | 132.3 | 128.8 |

## Hospital Admissions per 100,000 Member Months

*Findings* – HMP Population

HMP members averaged 2,905 hospital admissions per 100,000 member months and comparison group members averaged approximately 3,264 admissions per 100,000 member months across the three years (Exhibit F-241). The admission rate for the HMP population declined from 2019 to 2021. The admission rate for the comparison group population declined from 2019 to 2020 before rising slightly from 2020 to 2021.



Exhibit F-241 - HMP
Hospital Admissions per 100,000 Member Months

Note: Lower rate is better

The difference between the HMP and comparison group compliance rates was statistically significant in 2020 and 2021. It also was statistically significant for the three-year pooled data (Exhibit F-242).

| Exhibit F-242 – HMP – Hospital Admissions per 100,000 Member Months | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 3,324.3 | 2,736.2 | 2,654.5 | 2,905.0 |
| Comparison Group | 3,518.2 | 3,112.8 | 3,161.5 | 3,264.2 |
| Difference | (193.9)‡ | (376.6)‡ | (507.0)‡ | (359.2)‡ |
| ‡ HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 2,775 CG – 10,444 | HMP – 4,413 CG – 10,926 | HMP – 4,147 CG – 16,895 | HMP – 11,335 CG – 38,265 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP Population – Urban and Rural Subgroups

The HMP rural subgroup rate exceeded the urban subgroup rate across all three years. The rural subgroup rate declined from 2019 to 2021 while the urban subgroup rate declined from 2019 to 2020 and rose slightly again from 2020 to 2021 (Exhibit F-243).

**Exhibit F-243 - HMP - Urban/Rural Subgroups Hospital Admissions per 100,000 Member Months**
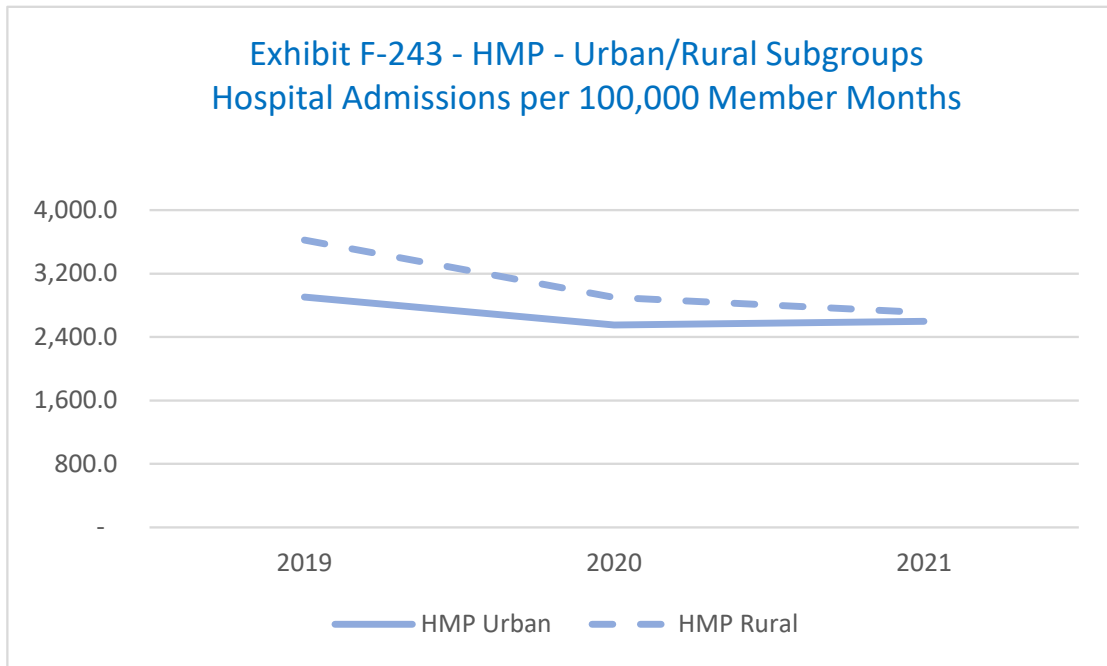


| | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Admission Rate | **Urban** | 2,902.4 | 2,550.8 | 2,599.5 |
| | **Rural** | 3,623.2 | 2,900.4 | 2,710.0 |

## Hospital 30-Day Readmission Rate (All Causes)

*Findings* – HMP Population

HMP and comparison group members both had an average 30-day hospital readmission rate of approximately six percent across the three years (Exhibit F-244). The readmission rate for both populations declined from 2019 to 2020 before rising again from 2020 to 2021.



Exhibit F-244 - HMP
Hospital Readmission Rate (All Causes)
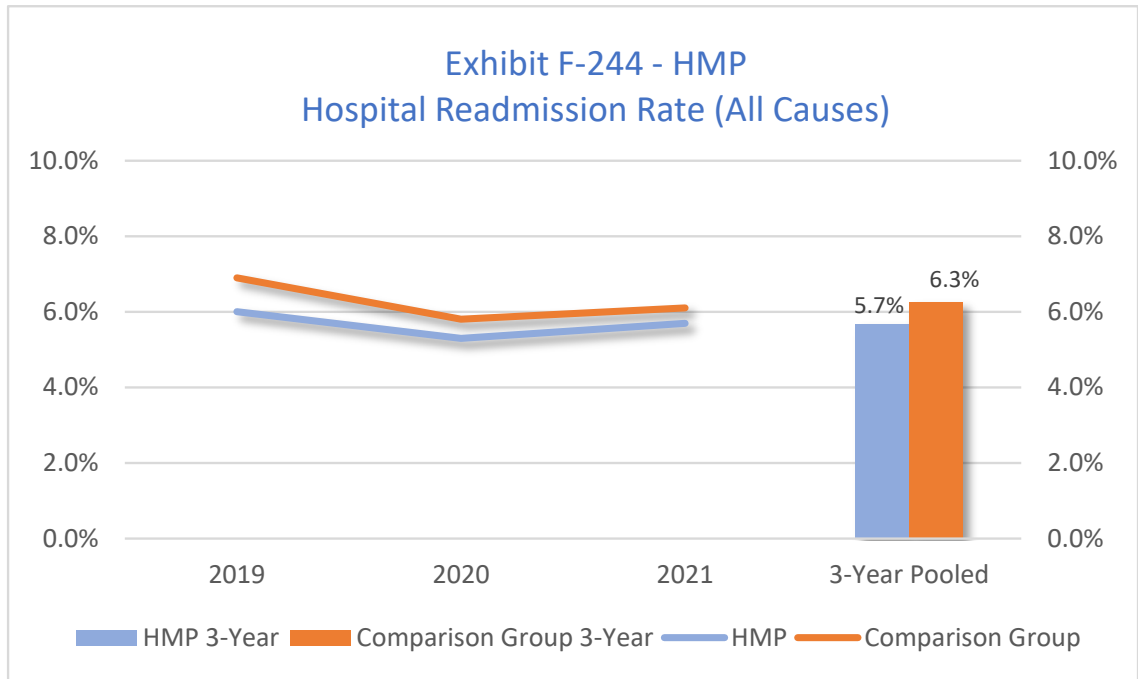
Note: Lower rate is better

The difference between the HMP and comparison group compliance rates was not statistically significant in any of the individual years. However, it was statistically significant for the three-year pooled data (Exhibit F-245).

| Exhibit F-245 – HMP – Hospital 30-Day Readmission Rate | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | 6.0% | 5.3% | 5.7% | 5.7% |
| Comparison Group | 6.9% | 5.8% | 6.1% | 6.3% |
| Difference | (0.9%) | (0.5%) | (0.4%) | (0.6%)‡ |
| ‡   HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 2,775 CG – 10,444 | HMP – 4,413 CG – 10,926 | HMP – 4,147 CG – 16,895 | HMP – 11,335 CG – 38,265 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

*Findings* – HMP Population – Urban and Rural Subgroups

The HMP rural subgroup rate exceeded the urban subgroup rate across all three years. The rate for both subgroups declined from 2019 to 2020 and rose again from 2020 to 2021 (Exhibit F-246).



Exhibit F-246 - HMP Urban/Rural Subgroups Hospital Readmission Rate (All Causes)

|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Readmission Rate | **Urban** | 4.8% | 4.3% | 4.5% |
|  | **Rural** | 6.8% | 6.1% | 6.7% |

## Per Member Per Month (PMPM) Expenditures

*Findings* – HMP Population

HMP member expenditures averaged approximately $619 PMPM and comparison group member expenditures averaged $767 PMPM across the three years (Exhibit F-247). Average expenditures for both populations rose from 2019 to 2021.
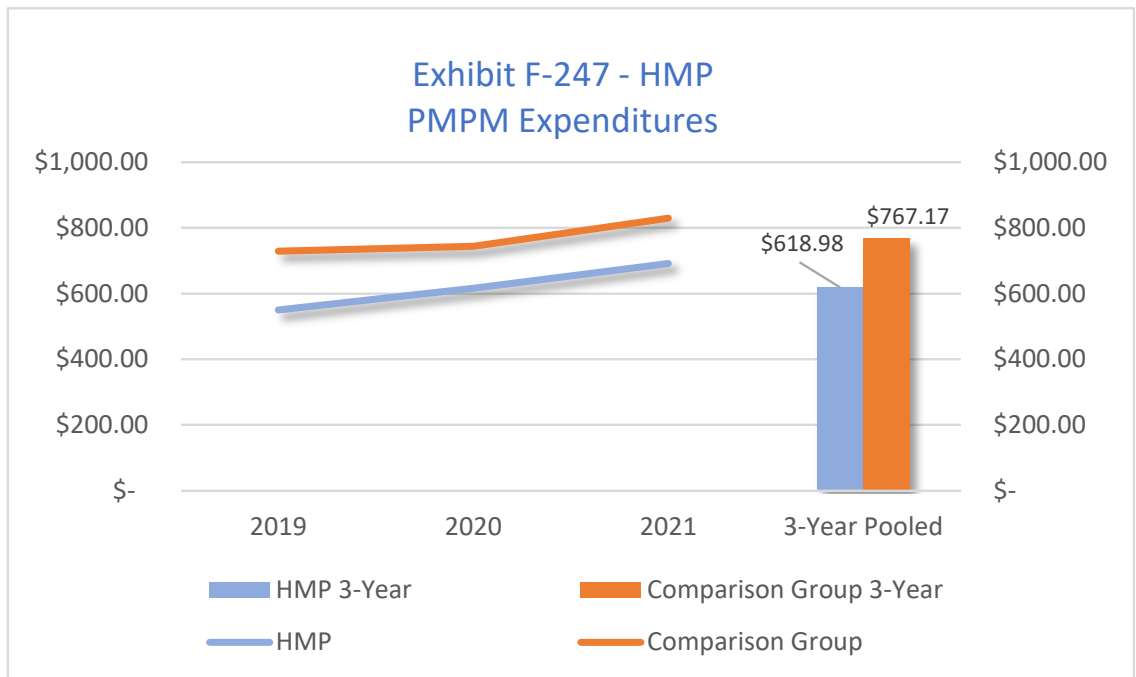


Exhibit F-247 - HMP PMPM Expenditures

Note: Lower rate is better

The difference between the HMP and comparison group compliance rates was statistically significant in each of the individual years. It also was statistically significant for the three-year pooled data (Exhibit F-248).

| Exhibit F-248 – HMP – PMPM Expenditures | | | | |
|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 3-Year Pooled |
| HMP | $550.09 | $616.09 | $690.77 | $618.98 |
| Comparison Group | $728.57 | $743.48 | $829.46 | $767.17 |
| Difference | ($178.48)‡ | ($127.39)‡ | ($138.69)‡ | ($148.19)‡ |
| ‡   HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level) | | | | |
| Sample Sizes | HMP – 2,775 CG – 10,444 | HMP – 4,413 CG – 10,926 | HMP – 4,147 CG – 16,895 | HMP – 11,335 CG – 38,265 |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | |

### *Findings* – HMP and Care Managed Populations – Urban and Rural Subgroups

HMP urban subgroup member expenditures slightly exceeded rural subgroup expenditures in 2019 and 2020, while rural subgroup expenditures exceeded urban subgroup expenditures in 2021. PMPM expenditures rose for both subgroups from 2019 to 2021 (Exhibit F-249).



Exhibit F-249 - HMP - Urban/Rural Subgroups PMPM Expenditures
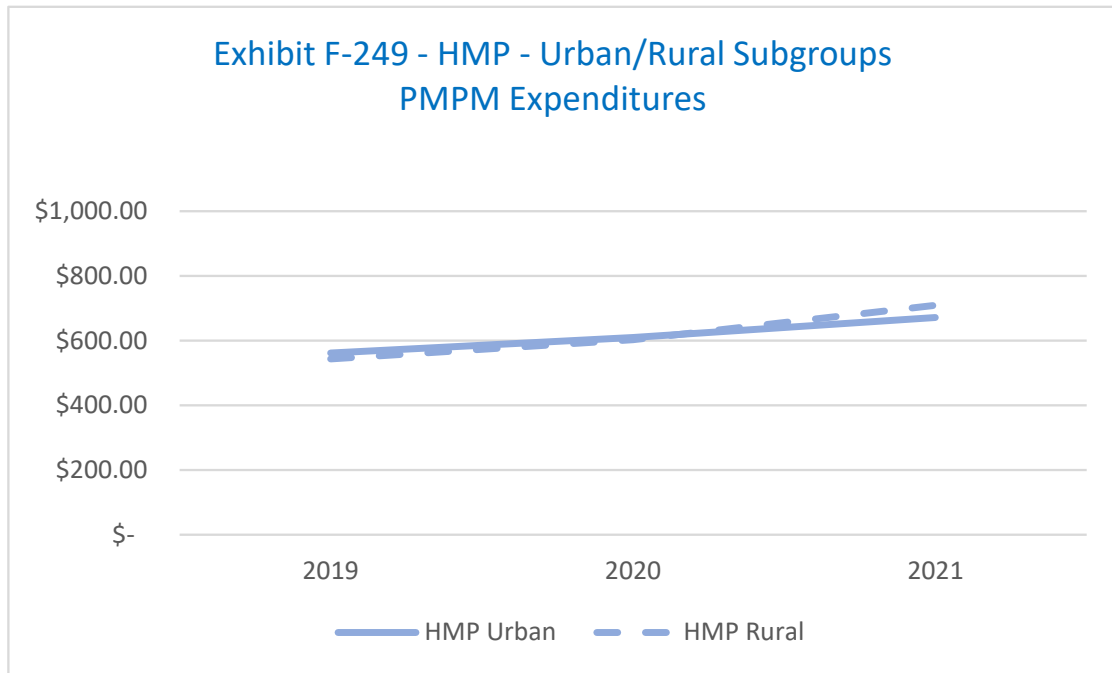
|  | Subgroup | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| PMPM | **Urban** | $561.89 | $610.33 | $671.66 |
|  | **Rural** | $543.58 | $603.28 | $709.55 |

## HMP Cost Effectiveness – Summary

The SoonerCare HMP and comparison group populations differed by a statistically significant amount on the four cost effectiveness measures, with the HMP population outperforming the comparison group (Exhibit F-250). Three of the four measures trended downward from 2019 to 2021 (lower rate is better).

### *Exhibit F-250 – HMP Cost Effectiveness – Summary*

| Measures | HMP versus Comparison Group | HMP 2019 – 2021 Trend |
|---|:---:|:---:|
| Emergency Room Visits per 1,000 Member Months | ✦ | ▼ |
| Hospital Admissions per 100,000 Member Months | ✦ | ▼ |
| Hospital 30-Day Readmission Rate | ✦ | ▼ |
| PMPM Expenditures | ✦ | ▲ |

✦ HMP exceeds comparison group by a statistically significant amount (3-year pooled)

✦ No statistically significant difference (3-year pooled)

✦ Comparison group exceeds HMP by a statistically significant amount (3-year pooled)

▲ 2019 - 2021 trend is upward (higher trend is worse)

▼ 2019 – 2021 trend is downward (lower trend is better)

**Retroactive Eligibility**

**HAN Access to Care**

**HAN Quality of Care**

**SoonerCare Evaluation**

**HMP Cost Effectiveness**

**HAN Cost Effectiveness**

**HMP Quality of Care**

**HMP Access to Care**
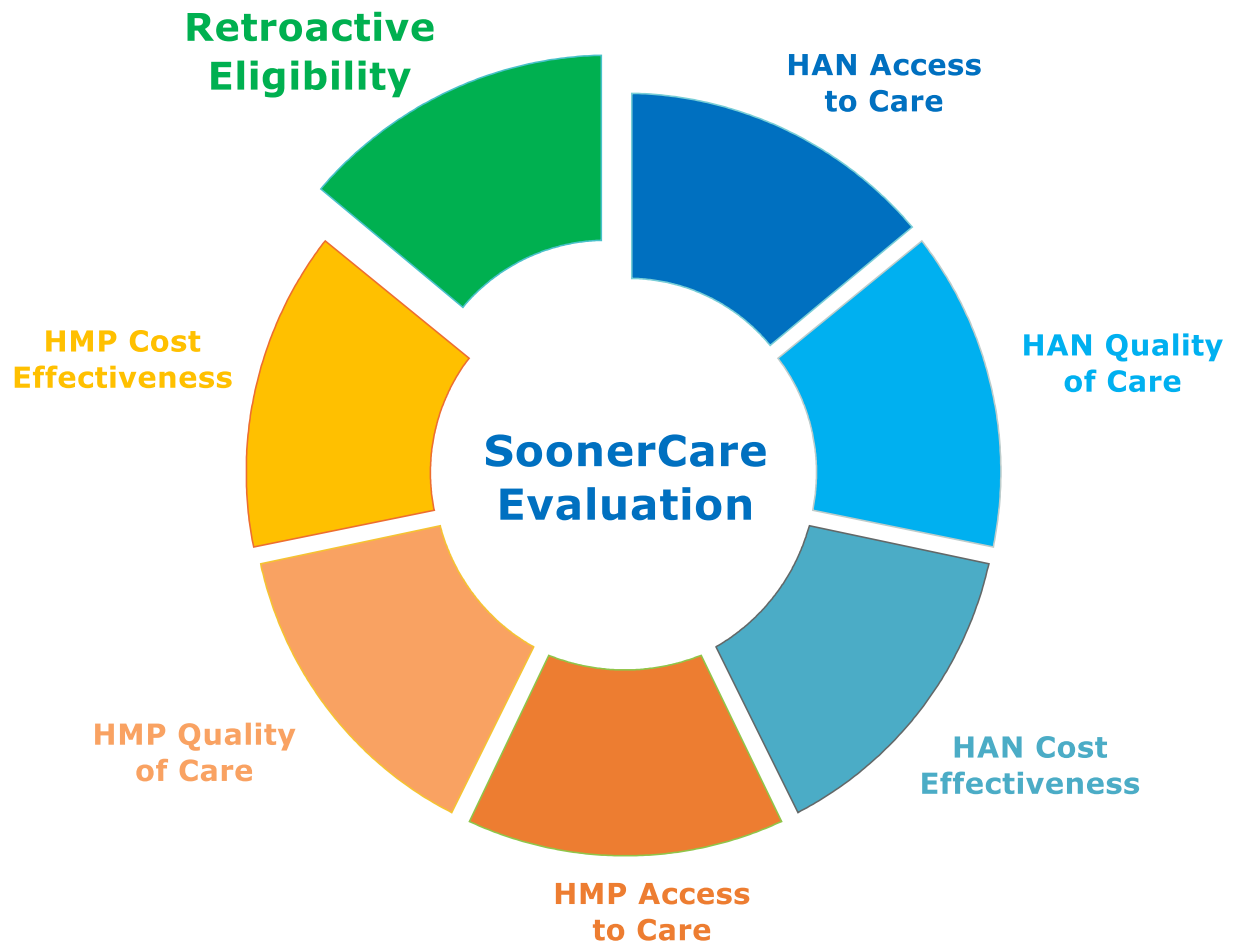
## 7. *Retroactive Eligibility Waiver*

### Overview

The SoonerCare Demonstration during the evaluation period included a waiver of retroactive eligibility for the parent/caretaker MEG and Insure Oklahoma beneficiaries[75]. (Exhibit B-10 presents detailed information on populations covered under the waiver and populations exempted from it[76].)  The retroactive eligibility waiver evaluation examines whether being subject to the waiver encourages eligible individuals to enroll earlier, to maintain health insurance coverage even while healthy, and to obtain preventive health care.

In March 2020, Oklahoma received a Section 1135 waiver, granting flexibilities for operating under the COVID-19 Public Health Emergency. As a condition of the waiver, Oklahoma agreed to a maintenance of effort in the form of continued eligibility for most SoonerCare members who otherwise would have lost eligibility absent the PHE.

The preservation of eligibility in the absence of timely re-certifications removed a key variable from the evaluation, which primarily relies on testing treatment group behaviors against a comparison group of members not subject to the waiver. In the absence of such data, the evaluation presents enrollment counts and survey findings but does not offer conclusions about the waiver's impact. The summative evaluation report will include findings for the post-PHE period in accordance with the approved design.

### Retroactive Eligibility Waiver Measures

Exhibit F-251 on the following page presents the retroactive eligibility waiver measures and identifies:

- Data sources

- Subgroups evaluated (if any)

- Presence or absence of a national benchmark

- Presence or absence of comparative data from the prior Demonstration period

### Supporting Appendices

Appendix 13 contains the retroactive eligibility targeted survey instrument. Appendix 14 contains CEM covariate balance tables for survey measures. Appendix 15 contains statistical significance tests results for survey measures.

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[75] Although the current demonstration period began on August 31, 2018, the MEGs subject to the retroactive eligibility waiver under current STCs took effect in March 2020, approximately concurrent with the PHE.
[76] The waiver applies only to adult beneficiaries in the affected MEGs. Accordingly, evaluation results are for adult beneficiaries only.

### Exhibit F-251 - Retroactive Eligibility Waiver Measures - Overview

| Measures[77] | Source | Geographic Subgroups | National Benchmark | Prior Period Data[78] |
|---|---|---|---|---|
| **Total Enrollment Trend** Number of individuals (adults) enrolled in Medicaid, by eligibility group, by quarter. | MMIS | No | No | No |
| **New Enrollment Trend** Number of new enrollees (adults) in Medicaid, by eligibility group, by quarter. | MMIS | No | No | No |
| **Beneficiary Health Status – Self-Reported** Beneficiary self-reported health status, measured at baseline and at 12, 18 and 24 months[79]. | PHPG Targeted Survey | No | No | No |
| **Beneficiary Health Status – Utilization** Beneficiary self-reported emergency department and hospital utilization in the past 12 months. | PHPG Targeted Survey | No | No | No |
| **Beneficiary Health Status – Not Healthy Days** Beneficiary self-reported not healthy days out of the past 30 days, both physical and mental health. | PHPG Targeted Survey | No | No | No |

Methodology detail and sample sizes also are included at the bottom of exhibits containing the results of statistical significance tests between treatment (Demonstration) and comparison group populations.

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[77] The approved evaluation design also includes several measures related to renewal timeliness and enrollment tenure (see Appendix 1, measures 74 – 78). These measures were not evaluated, due to the impact of the PHE-related suspension of disenrollments on the recertification process. They will be included in the summative evaluation report for the post-PHE period.

[78] The evaluation design for the retroactive eligibility waiver, and the affected MEGs, differed in the prior demonstration period.

[79] Interim evaluation includes results for baseline surveys. The summative evaluation report also will include results for follow-up surveys.

## Enrollment - Total Enrollment Trend

Total enrollment for SoonerCare beneficiaries subject to the retroactive eligibility waiver increased from 65,400 (rounded) in the first quarter of 2019 to 95,100 in the fourth quarter of 2021, a 42 percent change (Exhibit F-252). The growth began in the second quarter of 2020, concurrent with suspension of disenrollments under the PHE and accelerated in the fourth quarter of 2021, following implementation of Medicaid expansion[80].

Total enrollment for SoonerCare beneficiaries eligible for retroactive coverage also grew, increasing from 582,400 in the first quarter of 2019 to 721,900 in the fourth quarter of 2021, a 24 percent change. As with the population subject to the retroactive eligibility waiver, the growth began in the second quarter of 2020, concurrent with the start of the PHE.



Exhibit F-252 - Enrollment - Total Enrollment by Quarter
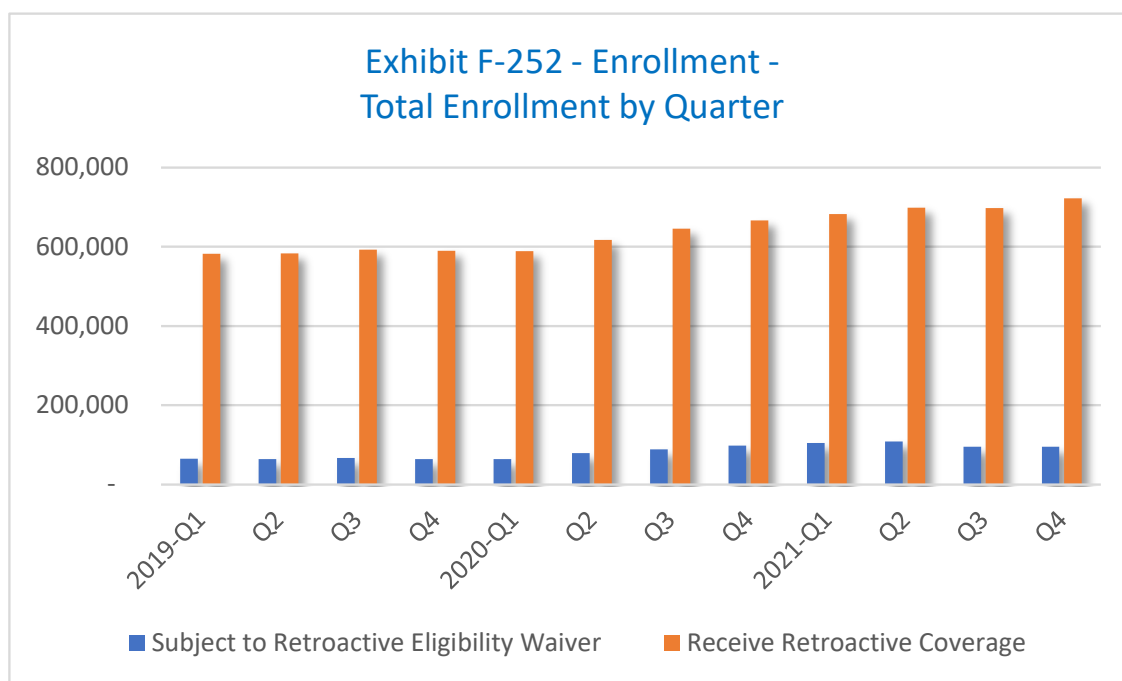
| Total Enrollment by Quarter (in thousands) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2009 | | | | 2020 | | | | 2021 | | | | |
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | % Change |
| Subject to Waiver | 64.5 | 64.3 | 66.4 | 64.3 | 64.2 | 79.0 | 88.0 | 98.0 | 104.4 | 108.7 | 95.5 | 95.1 | 47.4% |
| Receive Coverage | 582.4 | 583.3 | 592.6 | 590.2 | 589.1 | 617.2 | 645.3 | 666.1 | 682.7 | 698.8 | 698.0 | 721.9 | 23.9% |
| Total | 646.9 | 647.6 | 659.0 | 654.5 | 653.3 | 696.2 | 733.3 | 764.1 | 787.1 | 807.5 | 793.5 | 817.0 | 26.3% |

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[80] The drop in enrollment in quarters 3 and 4 of 2021 coincides with implementation of Medicaid expansion. The portion of the Parent/Caretaker MEG ineligible for Medicaid except for the PHE, but eligible under the expansion, was transitioned to the new MEG starting in July 2021. Expansion beneficiaries, who became eligible for SoonerCare Choice in September 2021, are not depicted in the exhibit pending the OHCA's decision as to whether to extend the retroactive eligibility waiver to this population (subject to CMS approval).

## Enrollment – New Enrollment Trend[81]

New enrollments for SoonerCare beneficiaries subject to the retroactive eligibility waiver fluctuated across the three years but averaged approximately 7,900 (rounded) per quarter (Exhibit F-253).

Total enrollment for SoonerCare beneficiaries eligible for retroactive coverage also fluctuated, averaging approximately 25,000 per quarter.



Exhibit F-253 - Enrollment - New Enrollment by Quarter
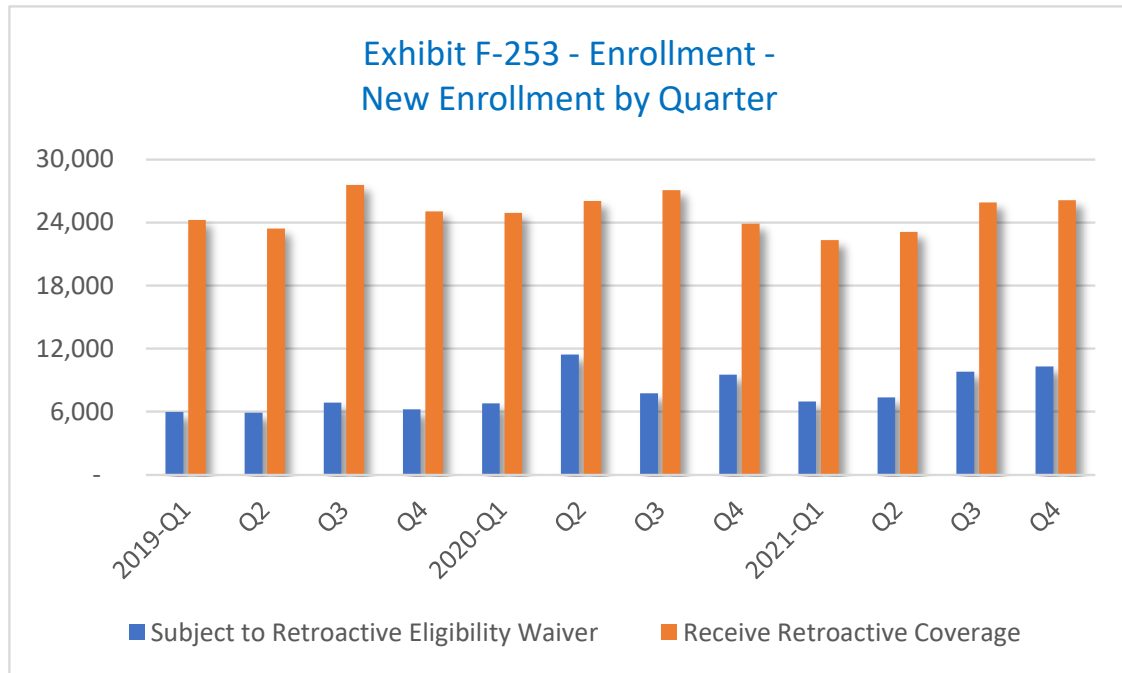
| New Enrollment by Quarter (in thousands) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2019 | | | | 2020 | | | | 2021 | | | | |
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Average |
| Subject to Waiver | 6.0 | 5.9 | 6.9 | 6.2 | 6.8 | 11.5 | 7.8 | 9.5 | 7.0 | 7.4 | 9.8 | 10.3 | 7.9 |
| Receive Coverage | 24.3 | 23.4 | 27.6 | 25.1 | 24.9 | 26.1 | 27.1 | 23.9 | 22.3 | 23.1 | 25.9 | 26.1 | 25.0 |
| Total | 30.3 | 29.3 | 34.5 | 31.3 | 31.7 | 37.6 | 34.9 | 33.4 | 29.3 | 30.5 | 35.7 | 36.4 | 32.9 |

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[81] New enrollment counts exclude beneficiaries who were enrolled (and subsequently disenrolled) at any point in the twelve months prior to their new enrollment period.

## Beneficiary Health Status – Self-Reported

### *Findings* – Baseline Survey

Approximately 42 percent of members subject to the retroactive eligibility waiver reported being in excellent or very good health at the time of the baseline survey[82]. Approximately 17 percent of the comparison group population reported being in excellent or very good health (Exhibit F-254 (The comparison group includes aged, blind and disabled members, among others.)
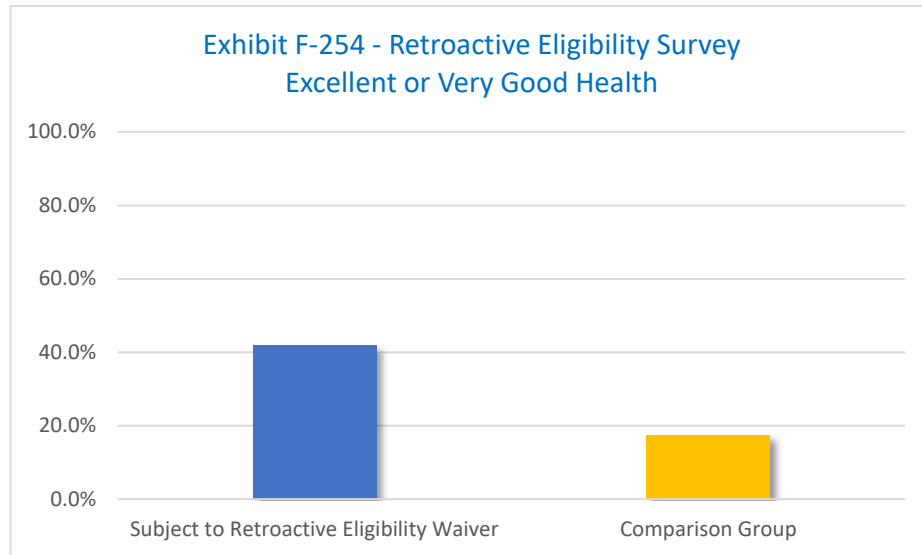


Exhibit F-254 - Retroactive Eligibility Survey
Excellent or Very Good Health

The difference between the retroactive eligibility waiver and comparison group populations was statistically significant among respondents reporting their health status as fair or good (Exhibit F-255).

| Exhibit F-255– Retroactive Eligibility Survey – Self-Reported Health Status | | | | | |
|---|---|---|---|---|---|
| | Poor | Fair | Good | Very Good | Excellent |
| Subject to Waiver | 5.4% | 16.2% | 36.6% | 29.9% | 11.9% |
| Comparison Group | 13.9% | 51.6% | 17.0% | 13.0% | 4.5% |
| Difference | (8.5%) | (35.4%)‡ | 19.6%‡ | 16.9% | 7.4% |
| ‡ Retroactive eligibility waiver group differs from comparison group by a statistically significant amount | | | | | |
| Sample Sizes - Retroactive Waiver – 446 / Comparison Group – 116 | | | | | |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | | |

[82] Survey question: How would you say that in general your health is – excellent, very good, good, fair or poor? (Question source – BRFSS 2018 survey.)

## Beneficiary Health Status – Utilization – Emergency Department

*Findings* – Baseline Survey

Approximately 68 percent of members subject to the retroactive eligibility waiver reported having no ED visits in the past twelve months, while approximately 32 percent reported having one or more visits[83]. The percentages for the comparison group were approximately 54 percent with no visits and 47 percent with one or more visits (Exhibit F-256). (Baseline surveys are conducted during the first 30 days of SoonerCare enrollment; at least 11 of the 12 months therefore pre-dates SoonerCare coverage.)



Exhibit - F-256 - Retroactive Eligibility Survey Number of ED Visits in Past 12 Months
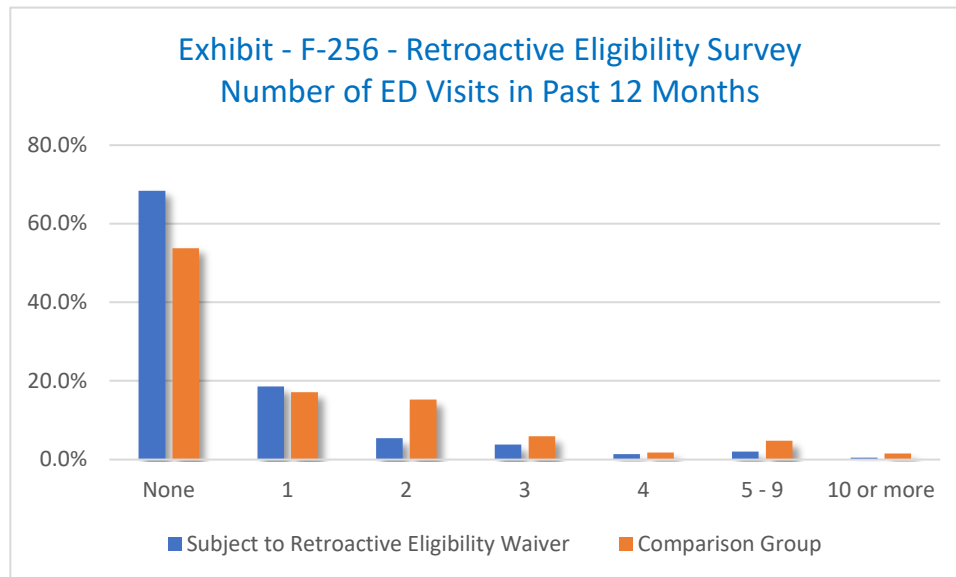
The difference between the retroactive eligibility waiver and comparison group populations was not statistically significant for any of the individual ED visit counts (Exhibit F-257).

| Exhibit F-257 – Retroactive Eligibility Survey – ED Visits in Past 12 Months | | | | | | | |
|---|---|---|---|---|---|---|---|
| | None | 1 | 2 | 3 | 4 | 5 – 9 | 10+ |
| Subject to Waiver | 68.4% | 18.6% | 5.4% | 3.8% | 1.3% | 2.0% | 0.4% |
| Comparison Group | 53.7% | 17.1% | 15.3% | 5.9% | 1.7% | 4.7% | 1.5% |
| Difference | 14.7% | 1.5% | (9.9%) | (2.1%) | (0.4%) | (2.7%) | (1.1%) |
| ‡ Retroactive eligibility waiver group differs from comparison group by a statistically significant amount | | | | | | | |
| Sample Sizes - Retroactive Waiver – 446 / Comparison Group – 116 | | | | | | | |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | | | | | | |

[83] Survey question: In the last 12 months, how many times did you go to an emergency room to get care for yourself? (Question source – CAHPS 5.0 Adult Health Plan survey.)

## Beneficiary Health Status – Utilization – Hospitalization

### *Findings* – Baseline Survey

Approximately 13 percent of both members subject to the retroactive eligibility and members in the comparison group population reported having been hospitalized in the past 12 months[84] (Exhibit F-258). (Baseline surveys are conducted during the first 30 days of SoonerCare enrollment; at least 11 of the 12 months therefore pre-dates SoonerCare coverage.)



Exhibit F-258 - Retroactive Eligibility Survey
Hospitalized in Past 12 Months - Yes
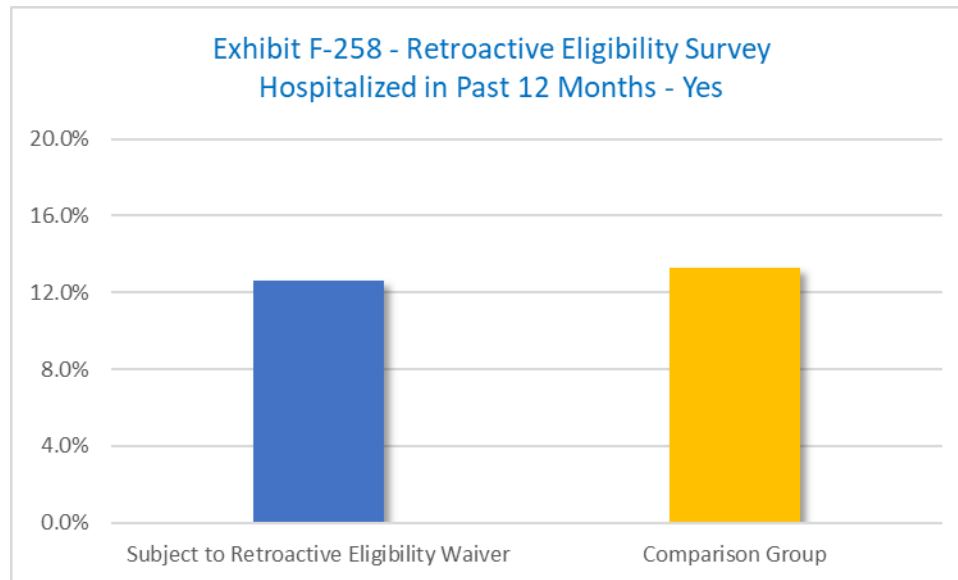
 The difference between the retroactive eligibility waiver and comparison group populations was not statistically significant (Exhibit F-259).

| Exhibit F-259 – Retroactive Eligibility Survey – Hospitalized in Past 12 Months | | |
|---|---|---|
| | Yes | No |
| Subject to Waiver | 12.6 % | 87.4% |
| Comparison Group | 13.3% | 86.7% |
| Difference | (0.7%) | |
| ‡ Retroactive eligibility waiver group differs from comparison group by a statistically significant amount | | |
| Sample Sizes - Retroactive Waiver – 446 / Comparison Group – 116 | | |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | |

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[84] Survey question: Have you been hospitalized overnight in the past 12 months? Do not include an overnight stay in the emergency room (Question source: FHOSPYR, NHIS Draft 2018 – Family.)

## Beneficiary Health Status – Not Healthy Days – Physical Health

*Findings* – Baseline Survey

Members subject to the retroactive eligibility reported having approximately five days out of the past 30 in which their physical health was not good. Members of the comparison group population reported having approximately 10 days out of the past 30 in which their physical health was not good[85]  (Exhibit F-260).
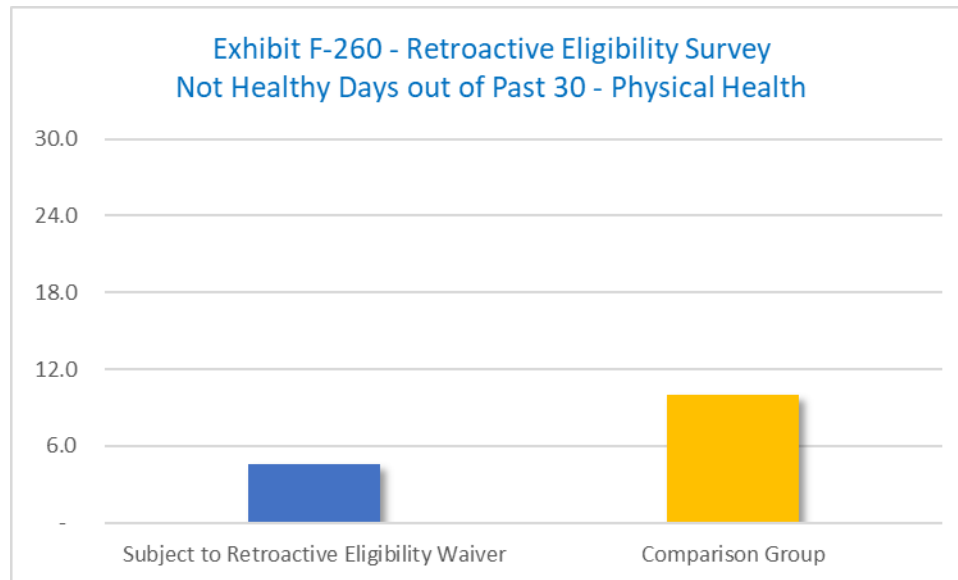


Exhibit F-260 - Retroactive Eligibility Survey
Not Healthy Days out of Past 30 - Physical Health

Note: Lower count is better

 The difference between the retroactive eligibility waiver and comparison group populations was statistically significant (Exhibit F-261).

| Exhibit F-261 – Retroactive Eligibility Survey – Not Healthy Days out of Past 30 Days (Physical Health) | | |
|---|---|---|
| | Not Healthy | Healthy (Imputed) |
| Subject to Waiver | 4.6 | 25.4 |
| Comparison Group | 10.0 | 20.0 |
| Difference | (5.4) ‡ | |
| ‡ Retroactive eligibility waiver group differs from comparison group by a statistically significant amount | | |
| Sample Sizes - Retroactive Waiver – 446 / Comparison Group – 116 | | |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | |

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[85] Survey question: Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good? (Question source: BRFSS 2018 survey.)

## Beneficiary Health Status – Not Healthy Days – Mental Health

### *Findings* – Baseline Survey

Members subject to the retroactive eligibility reported having approximately six days out of the past 30 in which their physical health was not good. Members of the comparison group population reported having approximately 12 days out of the past 30 in which their physical health was not good[86] (Exhibit F-262).
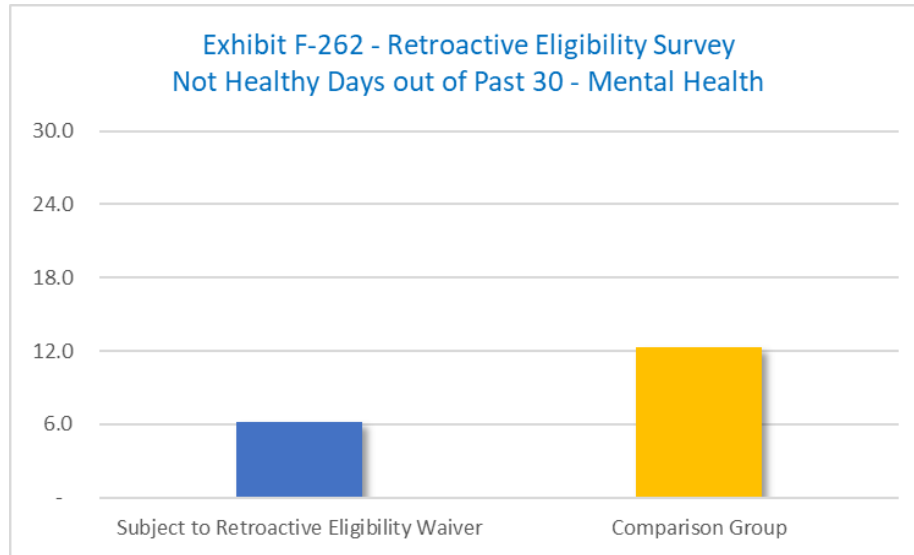


Exhibit F-262 - Retroactive Eligibility Survey
Not Healthy Days out of Past 30 - Mental Health

Note: Lower count is better

The difference between the retroactive eligibility waiver and comparison group populations was statistically significant (Exhibit F-263).

| Exhibit F-263 – Retroactive Eligibility Survey – Not Healthy Days out of Past 30 Days (Mental Health) | | |
|---|---|---|
| | Not Healthy | Healthy (Imputed) |
| Subject to Waiver | 6.2 | 23.8 |
| Comparison Group | 12.3 | 17.7 |
| Difference | (6.1) ‡ | |
| ‡ Retroactive eligibility waiver group differs from comparison group by a statistically significant amount | | |
| Sample Sizes - Retroactive Waiver – 446 / Comparison Group – 116 | | |
| Methodology – Coarsened Exact Matching for sample selection. T-test for statistical significance. | | |

[86] Survey question: Now thinking about your mental health, which includes stress, depression and problems with emotions, for how many days during the past 30 days was your mental health not good? (Question source: BRFSS 2018 survey.)

## Retroactive Eligibility Waiver – Summary

The population subject to the retroactive eligibility waiver and comparison group differed by a statistically significant amount on two of five health status-related measures. The population subject to the retroactive eligibility waiver outperformed the comparison group on both measures (Exhibit F-264).

### *Exhibit F-264 – Retroactive Eligibility Waiver – Summary*

| Measures | Retroactive Eligibility Waiver versus Comparison Group | Baseline to Follow-up Trend |
|---|:---:|:---:|
| **Total Enrollment Trend** | *Qualitative Measure* | |
| **New Enrollment Trend** | *Qualitative Measure* | |
| **Beneficiary Health Status – Excellent or Very Good** | ✦ | – |
| **Beneficiary Health Status – ED Utilization** | ✦ | – |
| **Beneficiary Health Status – Hospital Utilization** | ✦ | – |
| **Beneficiary Health Status – Not Healthy Days (Physical Health)** | ✦ | – |
| **Beneficiary Health Status – Not Healthy Days (Mental Health)** | ✦ | – |

✦    Population subject to retroactive eligibility waiver exceeds comparison group by a statistically significant amount (baseline)

✦    No statistically significant difference (baseline)

✦    Comparison group exceeds population subject to retroactive eligibility waiver by a statistically significant amount (baseline)

–    Trend from baseline to follow-up survey periods will be reported in summative evaluation

## G.  CONCLUSIONS

The SoonerCare Demonstration evaluation examines the impact of the Health Access Networks and Health Management Program on access, quality and cost. It also examines the impact of the retroactive eligibility waiver on beneficiary enrollment patterns and health status.

The interim evaluation includes data for only the first three years of the five-year Demonstration, making tentative any conclusions drawn from the analysis. The evaluation also overlapped with the COVID-19 PHE, which disrupted patterns-of-care in Oklahoma and throughout the nation.

Exhibit G-1 on the following page presents summary findings by evaluation domain and research area.  The exhibit documents the number of quantitative measures for which the Demonstration populations (HAN – total, HAN – care managed, HMP and persons subject to the retroactive eligibility waiver) differed from their respective comparison groups by a statistically significant amount.

The HMP population registered the greatest net positive results, outperforming the comparison group on 18 of 20 measures for which there was a statistically significant difference. Seven measures showed no statistically significant difference.

The HAN Care Managed population also showed net positive results, outperforming the comparison group on seven of eight measures for which there was a statistically significant difference. Eight measures showed no statistically significant difference.

The HAN Total population showed mixed results, outperforming the comparison group on six of 16 measures for which there was a statistically significant difference. Fourteen measures showed no statistically significant difference.

The population subject to the retroactive eligibility waiver outperformed the comparison group on both measures for which there was a statistically significant difference. Three measures showed no statistically significant difference.

### *Exhibit – G-1 - Demonstration Populations versus Comparison Groups – Summary*

| DOMAIN/Research Area | Demonstration Population Outperformed Comparison Group | Comparison Group Outperformed Demonstration Population | No Statistically Significant Difference |
|---|---|---|---|
| HAN (TOTAL) – Access to Care | | 🔴🔴 | ⚪⚪ |
| HAN (TOTAL) – Quality of Care | 🔵🔵🔵🔵🔵🔵 | 🔴🔴🔴🔴🔴 | ⚪⚪⚪⚪ ⚪⚪⚪⚪ ⚪⚪⚪⚪ |
| HAN (TOTAL) – Cost Effectiveness | | 🔴🔴 | ⚪ |
| HAN (CARE MANAGED) – Access to Care | 🔵🔵 | | |
| HAN (CARE MANAGED) – Quality of Care | 🔵🔵🔵🔵 | | ⚪⚪⚪⚪ ⚪⚪⚪⚪ ⚪ |
| HAN (CARE MANAGED) – Cost Effectiveness | 🔵 | 🔴 | ⚪ |
| HMP – Access to Care | 🔵🔵 | | |
| HMP – Quality of Care | 🔵🔵🔵🔵🔵🔵🔵🔵🔵🔵🔵🔵 | 🔴🔴 | ⚪⚪⚪⚪ ⚪⚪ |
| HMP – Cost Effectiveness | 🔵🔵🔵🔵 | | |
| RETROACTIVE ELIGIBILITY – Health Status | 🔵🔵 | | ⚪⚪⚪ |

🔵 One measure (Demonstration population outperformed comparison group)

🔴 One measure (comparison group outperformed Demonstration population)

⚪ One measure (no difference)

## H.   INTERPRETATIONS & POLICY LIMITATIONS/INTERACTIONS WITH OTHER STATE INITIATIVES

The majority of state Medicaid programs have transitioned to managed care by enrolling at least a portion of their populations into capitated health plans. Health plan contracts typically encompass most or all covered medical services, and in many instances also include behavioral health.  The contracts also require health plans to assess their members' medical, behavioral health (if applicable) and social service needs, develop care plans and provide care management in accordance with care plan goals and interventions.

Oklahoma is one of a minority of states that has elected to implement managed care through a non-traditional model. After terminating its capitated program in 2004, the OHCA began a years-long transition to the SoonerCare Choice program in place during the waiver evaluation period.

SoonerCare Choice seeks to achieve the same access, quality and cost effectiveness objectives common to capitated programs but to do so in a more targeted fashion. The OHCA contracts with the SoonerCare HANs and SoonerCare HMP vendor to offer practice enhancement to affiliated PCMH providers and provide care management to high-risk beneficiaries.

Medicaid benefits continue to be paid on a fee-for-service basis and the majority of SoonerCare Demonstration beneficiaries, who are healthy children and pregnant women, receive any needed care coordination through their PCMH provider and/or prenatal care provider.

The OHCA is preparing to transition the non-ABD portion of the SoonerCare Choice population back into risk based managed care, with implementation scheduled for early 2024. This will coincide with the completion of the current five-year Demonstration period and will present the opportunity to evaluate the impact of the transition on the non-ABD population, while continuing to monitor outcomes for the residual population remaining in the non-traditional model.

Contracting with capitated health plans is a proven strategy for implementing managed care.  At the same time, the current SoonerCare Demonstration model offers another option for states to consider when implementing or expanding managed care in areas where a capitated program may be difficult to establish, such as rural/frontier counties.

## I.  LESSONS LEARNED & RECOMMENDATIONS

It is premature to draw lessons or make recommendations during the interim evaluation stage, particularly given the still unknown full impact of the COVID-19 PHE.

The summative evaluation report will address lessons learned and recommendations based on a complete five-year analysis, the final portion of which is expected to lie outside of the PHE window.

## J. APPENDICES

Supporting appendices for the evaluation design and results section are presented, starting on the following page.

| Appendix | Applies to | Contents |
|---|---|---|
| Appendix 1 | All Sections | Approved evaluation design, CMS recommendations for enhanced evaluation and listing of deviations from approved design |
| Appendix 2 | HAN Analysis | CEM covariate balance tables (pre- and post-matching) for HEDIS, utilization and expenditure measures (2019 – 2021) |
| Appendix 3 | HAN Analysis | Statistical significance test results (p<.005) for HEDIS, utilization and expenditure measures (2019 – 2021 and three-year pooled data) |
| Appendix 4 | HAN Analysis | CEM covariate balance tables (pre- and post-matching) for CAHPS measures |
| Appendix 5 | HAN Analysis | Statistical significance test results for CAHPS measures (HAN and comparison group) |
| Appendix 6 | HAN Analysis | HAN member SDOH targeted survey instrument (HAN and comparison group) |
| Appendix 7 | HAN Analysis | HAN-aligned PCMH targeted survey instrument |
| Appendix 8 | HMP Analysis | CEM covariate balance tables (pre- and post-matching) for CAHPS measures (HMP and comparison group) |
| Appendix 9 | HMP Analysis | Statistical significance test results for CAHPS measures (HMP and comparison group) |
| Appendix 10 | HMP Analysis | CEM covariate balance tables (pre- and post-matching) for HEDIS, utilization and expenditure measures (2019 – 2021) |
| Appendix 11 | HMP Analysis | Statistical significance test results (p<.005) for HEDIS, utilization and expenditure measures (2019 – 2021 and three-year pooled data) |
| Appendix 12 | HMP Analysis | HMP member targeted survey instrument (SDOH section only) |
| Appendix 13 | Retroactive Eligibility | Retroactive eligibility analysis survey instrument |
| Appendix 14 | Retroactive Eligibility | CEM covariate balance tables (pre- and post-matching) for survey measures |
| Appendix 15 | Retroactive Eligibility | Statistical significance test results for retroactive survey measures (population subject to waiver and comparison group) |

## 1. *Approved Evaluation Design Measure Set and Related*

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| **Evaluation of Health Access Networks – Access to Care** | | | | | | |
| 1 | Will the implementation and expansion of the HANs improve access to and the availability of health care services to SoonerCare beneficiaries served by the HANs? | Child and adolescent access to PCPs – 12 months to 19 years | Members within age cohort enrolled with a HAN-affiliated PCMH | In accordance with HEDIS specifications (administrative data only) | SoonerCare Choice members within age cohort not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |
| 2 | | Adult access to preventive/ ambulatory health services | Members within age cohort enrolled with a HAN-affiliated PCMH | In accordance with HEDIS specifications (administrative data only) | SoonerCare Choice members within age cohort not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |
| 3 | | Getting needed care – children and adults | Adult members enrolled with a HAN-affiliated PCMH<br><br>Child members enrolled with a HAN-affiliated PCMH | In accordance with CAHPS specifications | SoonerCare Choice adult members not enrolled with a HAN-affiliated PCMH<br><br>SoonerCare Choice child members not enrolled with a HAN-affiliated PCMH | Source - CAHPS survey data file<br><br>Steward – CAHPS | T-tests<br><br>Regression with propensity score matching |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 4 | | Rating of health plan – children and adults | Adult members enrolled with a HAN-affiliated PCMH<br><br>Child members enrolled with a HAN-affiliated PCMH | In accordance with CAHPS specifications | SoonerCare Choice adult members not enrolled with a HAN-affiliated PCMH<br><br>SoonerCare Choice child members not enrolled with a HAN-affiliated PCMH | Source - CAHPS survey data file<br><br>Steward – CAHPS | T-tests<br><br>Regression with propensity score matching |
| 5 | | Rating of personal doctor – children and adults | Adult members enrolled with a HAN-affiliated PCMH<br><br>Child members enrolled with a HAN-affiliated PCMH | In accordance with CAHPS specifications | SoonerCare Choice adult members not enrolled with a HAN-affiliated PCMH<br><br>SoonerCare Choice child members not enrolled with a HAN-affiliated PCMH | Source - CAHPS survey data file<br><br>Steward – CAHPS | T-tests<br><br>Regression with propensity score matching |
| | **Evaluation of Health Access Networks – Quality of Care** | | | | | | |
| 6 | Will the implementation and expansion of the HANs improve the quality and coordination of health care services to SoonerCare beneficiaries served by the HANs, including specifically populations at greatest risk (e.g., | Number of members engaged in care management | Total unduplicated members engaged in care management at any point during year<br><br>Unduplicated members with multiple chronic illnesses engaged in care management at any point during the year | Numerators – members engaged in care management (total and population with multiple chronic conditions<br><br>Denominators – all members (total and population with multiple chronic conditions) | N/A | Source - HAN care management databases<br><br>Steward - HANs | Time series |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 7 | those with multiple chronic illnesses)? | Asthma – use of appropriate medications for people with asthma | HAN members with asthma | In accordance with HEDIS specifications | SoonerCare Choice members with asthma not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |
| 8 | | Asthma – Medication management for people with asthma – 75 percent | HAN members with asthma | In accordance with HEDIS specifications | SoonerCare Choice members with asthma not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |
| 9 | | CAD – Persistent beta-blocker treatment after a heart attack | HAN members with CAD and heart failure | In accordance with HEDIS specifications | SoonerCare Choice members with CAD/heart failure not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |
| 10 | | CAD – Cholesterol management for patients with cardiovascular conditions – LDL-C test | HAN members with CAD and heart failure | In accordance with HEDIS specifications | SoonerCare Choice members with CAD/heart failure not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 11 | | COPD – Use of spirometry testing in the assessment and diagnosis of COPD | HAN members with COPD | In accordance with HEDIS specifications | SoonerCare Choice members with COPD not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |
| 12 | | COPD – pharmacotherapy management of COPD exacerbation – 14 days | HAN members with COPD | In accordance with HEDIS specifications | SoonerCare Choice members with COPD not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |
| 13 | | COPD – pharmacotherapy management of COPD exacerbation – 30 days | HAN members with COPD | In accordance with HEDIS specifications | SoonerCare Choice members with COPD not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |
| 14 | | Diabetes – Percentage of members who had LDL-C test | HAN members with diabetes | In accordance with HEDIS specifications | SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|-----|-------------------|---------|------------|------------------------|------------------|-------------------------------|------------------|
| 15 | | Diabetes – percentage of members who had retinal eye exam performed | HAN members with diabetes | In accordance with HEDIS specifications | SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |
| 16 | | Diabetes – percentage of members who had HbA1c testing | HAN members with diabetes | In accordance with HEDIS specifications | SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |
| 17 | | Diabetes - Percentage of members who received medical attention for nephropathy | HAN members with diabetes | In accordance with HEDIS specifications | SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |
| 18 | | Diabetes - Percentage of members prescribed ACE/ARB therapy | HAN members with diabetes | In accordance with HEDIS specifications | SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 19 | | Hypertension – Percentage of members who had LDL-C test | HAN members with hypertension | In accordance with HEDIS specifications | SoonerCare Choice members with hypertension not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |
| 20 | | Hypertension – Percentage of members prescribed ACE/ARB therapy | HAN members with hypertension | In accordance with HEDIS specifications | SoonerCare Choice members with hypertension not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |
| 21 | | Hypertension – Percentage of members prescribed diuretics | HAN members with hypertension | In accordance with HEDIS specifications | SoonerCare Choice members with hypertension not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |
| 22 | | Hypertension – Percentage of members prescribed ACE/ARB therapy or diuretics with annual medication monitoring | HAN members with hypertension | In accordance with HEDIS specifications | SoonerCare Choice members with hypertension not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 23 | | Mental Health – Follow-up after hospitalization for mental illness – 7 days | HAN members hospitalized for mental illness | In accordance with HEDIS specifications | SoonerCare Choice members hospitalized for mental illness not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |
| 24 | | Mental Health – Follow-up after hospitalization for mental illness – 30 days | HAN members hospitalized for mental illness | In accordance with HEDIS specifications | SoonerCare Choice members hospitalized for mental illness not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching |
| 25 | | SDOH – Member satisfaction | Randomly selected sample of HAN members receiving assistance with SDOH as part of care management | Numerator – Members reporting satisfaction<br><br>Denominator – All respondents | N/A | Source - HAN care management databases for sample<br><br>Steward - SoonerCare Independent Evaluator for survey data | Descriptive statistics |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 26 | Will the implementation and expansion of the HANs enhance the State's PCMH program by making HAN care management and support available to more providers, as documented through an evaluation of PCP profiles that incorporates a review of utilization, disease guideline compliance and cost?<br><br>*(Note: HEDIS chronic disease measures from preceding hypothesis/question also will be included in evaluation of this hypothesis/question, as PCMH providers drive member compliance.)* | Number and percentage of HAN-affiliated PCMH providers who have attained the highest level of OHCA accreditation | HAN-affiliated PCMH providers | Numerator – PCMH providers with Tier 3 accreditation (or highest level under any future redesign of PCMH tiers)<br><br>Denominator – All HAN-aligned PCMH providers | PCMH providers not aligned with a HAN | Source – MMIS<br><br>Steward – OHCA | Time series |
| 27 | | PCMH provider satisfaction with HAN practice support activities | Randomly selected sample of HAN-affiliated PCMH providers | Numerator – Providers reporting satisfaction<br><br>Denominator – All respondents | N/A | Source – MMIS for provider sample<br><br>Steward – SoonerCare Independent Evaluator for survey data | Descriptive statistics |
| 28 | | PCMH provider adoption of chronic care disease guidelines (self-reported) | Randomly selected sample of HAN-affiliated PCMH providers | Numerator – Providers reporting compliance by disease state<br><br>Denominator – All respondents | N/A | Source – MMIS for provider sample<br><br>Steward – SoonerCare Independent Evaluator for survey data | Descriptive statistics |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| **Evaluation of Health Access Networks – Cost Effectiveness** | | | | | | | |
| 29 | Will the implementation and expansion of the HANs reduce cost associated with provision of health care services to SoonerCare beneficiaries served by the HANs? | Emergency room utilization | SoonerCare Choice HAN members | Numerator – ED visits<br><br>Denominator – total member months | SoonerCare Choice members not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source – MMIS<br><br>Steward – OHCA | T-tests<br><br>Regression with propensity score matching |
| 30 | | Hospital admissions | SoonerCare Choice HAN members | Numerator – IP admissions<br><br>Denominator – total member months | SoonerCare Choice members not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP PCMH and not enrolled in the HMP | Source – MMIS<br><br>Steward – OHCA | T-tests<br><br>Regression with propensity score matching |
| 31 | | Evaluation of Health Access Networks – PMPM Expenditures | SoonerCare Choice HAN members | Numerator – total expenditures (paid claims and PCMH case management fees)<br><br>Denominator – total member months | SoonerCare Choice members not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source – MMIS<br><br>Steward – OHCA | T-tests<br><br>Regression with propensity score matching |
| **Evaluation of Health Management Program – Access to Care** | | | | | | | |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 32 | Will implementation of the third generation HMP, including health coaches and practice facilitation, result in an increase in enrollment, as compared to baseline? | Number of members engaged in health coaching | SoonerCare HMP members engaged in health coaching (minimum of three months), by coaching method | N/A | HMP beneficiaries enrolled in second generation HMP | Source – HMP contractor database<br><br>Steward – HMP contractor | Interrupted time series |
| 33 | Will incorporating health coaches into primary care practices result in increased contact with HMP beneficiaries by the PCP (measured through claims encounter data), as compared to baseline, when care management occurred (exclusively) via telephonic or face-to-face contact with a nurse care manager? | Number of PCP contacts (total and per member engaged in health coaching) | SoonerCare HMP members engaged in health coaching (minimum of three months), by coaching method | Numerator - Member contacts (visits) with PCMH, by coaching method<br><br>Denominator – Member months, by coaching method | Members receiving health coaching in PCMH offices will be compared to members receiving field-based and telephonic health coaching | Source – MMIS; HMP contractor database<br><br>Steward – OHCA for claims; HMP contractor for member assignments | T-tests<br><br>Regression with propensity score matching |
| | **Evaluation of Health Management Program – Quality of Care** | | | | | | |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 34 | Will implementation of the third generation HMP result in an increase in the average risk profile of newly-enrolled members (based on the average number of chronic conditions) as the program becomes available to qualified members who do not currently have access to the HMP? | Average number of chronic conditions | SoonerCare members enrolled in the HMP, by coaching method | Numerator – Number of chronic conditions  Denominator – Number of members | HMP beneficiaries enrolled in second generation HMP | Source – MMIS; HMP contractor database  Steward – OHCA for claims; HMP contractor for member assignments | Interrupted time series |
| 35 | | Percentage of members with physical/behavioral health co-morbidities | SoonerCare members enrolled in the HMP, by coaching method | Numerator – Number of members with at least one chronic physical and one behavioral health condition  Denominator – Number of members | HMP beneficiaries enrolled in second generation HMP | Source – MMIS; HMP contractor database  Steward – OHCA for claims; HMP contractor for member assignments | Interrupted time series |
| 36 | Will the use of disease registry functions by the health coach (along with other coaching activities) improve the quality of care delivered to beneficiaries, as measured by changes in performance on the | Asthma – use of appropriate medications for people with asthma | HMP members with asthma | In accordance with HEDIS specifications | SoonerCare Choice members with asthma not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP  HMP beneficiaries enrolled in second generation HMP | Source - MMIS  Steward - NCQA | T-tests  Regression with propensity score matching  Interrupted time series |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 37 | initial set of Health Care Quality Measures for Medicaid-Eligible Adults or CHIPRA Core Set of Children's Healthcare Quality Measures? | Asthma – Medication management for people with asthma – 75 percent | HMP members with asthma | In accordance with HEDIS specifications | SoonerCare Choice members with asthma not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching<br><br>Interrupted time series |
| 38 | | Asthma - COPD or asthma in older adults admission rate | HMP members with asthma or COPD | In accordance with AHRQ specifications | SoonerCare Choice members with COPD or asthma not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - AHRQ | T-tests<br><br>Regression with propensity score matching<br><br>Interrupted time series |
| 39 | | Asthma – Asthma in younger adults admission rate | HMP members with asthma | In accordance with AHRQ specifications | SoonerCare Choice members with COPD or asthma not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - AHRQ | T-tests<br><br>Regression with propensity score matching<br><br>Interrupted time series |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 40 | | CAD – Persistent beta-blocker treatment after a heart attack | HMP members with CAD and heart failure | In accordance with HEDIS specifications | SoonerCare Choice members with CAD not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP HMP beneficiaries enrolled in second generation HMP | Source - MMIS Steward - NCQA | T-tests Regression with propensity score matching Interrupted time series |
| 41 | | CAD – Cholesterol management for patients with cardiovascular conditions – LDL-C test | HMP members with CAD and heart failure | In accordance with HEDIS specifications | SoonerCare Choice members with CAD not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP HMP beneficiaries enrolled in second generation HMP | Source - MMIS Steward - NCQA | T-tests Regression with propensity score matching Interrupted time series |
| 42 | | CAD – Heart failure admission rate | HMP members with heart failure | In accordance with AHRQ specifications | SoonerCare Choice members with CAD not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP HMP beneficiaries enrolled in second generation HMP | Source - MMIS Steward - AHRQ | T-tests Regression with propensity score matching Interrupted time series |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 43 | | COPD – Use of spirometry testing in the assessment and diagnosis of COPD | HMP members with COPD | In accordance with HEDIS specifications | SoonerCare Choice members with COPD or asthma not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching<br><br><br>Interrupted time series |
| 44 | | COPD – pharmacotherapy management of COPD exacerbation – 14 days | HMP members with COPD | In accordance with HEDIS specifications | SoonerCare Choice members with COPD or asthma not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching<br><br><br>Interrupted time series |
| 45 | | COPD – pharmacotherapy management of COPD exacerbation – 30 days | HMP members with COPD | In accordance with HEDIS specifications | SoonerCare Choice members with COPD or asthma not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching<br><br><br>Interrupted time series |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 46 | | Diabetes – Percentage of members who had LDL-C test | HMP members with diabetes | In accordance with HEDIS specifications | SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching<br><br><br>Interrupted time series |
| 47 | | Diabetes – percentage of members who had retinal eye exam performed | HMP members with diabetes | In accordance with HEDIS specifications | SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching<br><br><br>Interrupted time series |
| 48 | | Diabetes – percentage of members who had HbA1c testing | HMP members with diabetes | In accordance with HEDIS specifications | SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching<br><br><br>Interrupted time series |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 49 | | Diabetes - Percentage of members who received medical attention for nephropathy | HMP members with diabetes | In accordance with HEDIS specifications | SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching<br><br>Interrupted time series |
| 50 | | Diabetes - Percentage of members prescribed ACE/ARB therapy | HMP members with diabetes | In accordance with HEDIS specifications | SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching<br><br>Interrupted time series |
| 51 | | Diabetes – Diabetes short-term complications admission rate | HMP members with diabetes | In accordance with AHRQ specifications | SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - AHRQ | T-tests<br><br>Regression with propensity score matching<br><br>Interrupted time series |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 52 | | Hypertension – Percentage of members who had LDL-C test | HMP members with hypertension | In accordance with HEDIS specifications | SoonerCare Choice members with hypertension not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching<br><br>Interrupted time series |
| 53 | | Hypertension – Percentage of members prescribed ACE/ARB therapy | HMP members with hypertension | In accordance with HEDIS specifications | SoonerCare Choice members with hypertension not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching<br><br>Interrupted time series |
| 54 | | Hypertension – Percentage of members prescribed diuretics | HMP members with hypertension | In accordance with HEDIS specifications | SoonerCare Choice members with hypertension not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching<br><br>Interrupted time series |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 55 | | Hypertension – Percentage of members prescribed ACE/ARB therapy or diuretics with annual medication monitoring | HMP members with hypertension | In accordance with HEDIS specifications | SoonerCare Choice members with hypertension not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching<br><br>Interrupted time series |
| 56 | | Mental Health – Follow-up after hospitalization for mental illness – 7 days | HMP members hospitalized for mental illness | In accordance with HEDIS specifications | SoonerCare Choice members hospitalized for mental illness not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching<br><br>Interrupted time series |
| 57 | | Mental Health – Follow-up after hospitalization for mental illness – 30 days | HMP members hospitalized for mental illness | In accordance with HEDIS specifications | SoonerCare Choice members hospitalized for mental illness not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP | Source - MMIS<br><br>Steward - NCQA | T-tests<br><br>Regression with propensity score matching<br><br>Interrupted time series |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| | | | | | HMP beneficiaries enrolled in second generation HMP | | |
| 58 | | Opioid – Use of opioids at high dosage in persons without cancer | HMP members prescribed opioids (through Medicaid) | In accordance with PQA specifications | SoonerCare Choice members prescribed opioids not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - PQA | T-tests<br><br>Regression with propensity score matching<br><br><br>Interrupted time series |
| 59 | | Opioid – Concurrent use of opioids and benzodiazepines | HMP members prescribed opioids (through Medicaid) | In accordance with PQA specifications | SoonerCare Choice members prescribed opioids and benzodiazepines not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source - MMIS<br><br>Steward - PQA | T-tests<br><br>Regression with propensity score matching<br><br><br>Interrupted time series |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 60 | | SDOH – Member awareness of SDOH available assistance | Randomly selected sample of HMP members enrolled in HMP | Numerators – Members reporting awareness and use of SDOH assistance available through HMP<br><br>Denominator – All respondents | N/A | Source – SoonerCare Independent Evaluator survey data file<br><br>Steward - SoonerCare Independent Evaluator for survey data | Descriptive statistics |
| 61 | | SDOH – Member satisfaction with SDOH available assistance | Randomly selected sample of HMP members enrolled in HMP | Numerator – Members reporting satisfaction with SDOH assistance<br><br>Denominator – All respondents reporting use of assistance | N/A | Source – SoonerCare Independent Evaluator survey data file<br><br>Steward - SoonerCare Independent Evaluator for survey data | Descriptive statistics |
| 62 | Will beneficiaries using HMP services have higher satisfaction compared to beneficiaries not receiving HMP services (as measured through CAHPS survey questions)? | Rating of health care – children and adults | Adult HMP members<br><br>Child HMP members | In accordance with CAHPS specifications | SoonerCare Choice adult members not enrolled with a HAN-affiliated PCMH<br><br>SoonerCare Choice child members not enrolled with a HAN-affiliated PCMH | Source – SoonerCare Independent Evaluator survey data file<br><br>Steward – CAHPS | T-tests<br><br>Regression with propensity score matching |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 63 | | Getting needed care – children and adults | Adult HMP members<br><br>Child HMP members | In accordance with CAHPS specifications | SoonerCare Choice adult members not enrolled with a HAN-affiliated PCMH<br><br>SoonerCare Choice child members not enrolled with a HAN-affiliated PCMH | Source – SoonerCare Independent Evaluator survey data file<br><br>Steward – CAHPS | T-tests<br><br>Regression with propensity score matching |
| 64 | | Rating of health plan – children and adults | Adult HMP members<br><br>Child HMP members | In accordance with CAHPS specifications | SoonerCare Choice adult members not enrolled with a HAN-affiliated PCMH<br><br>SoonerCare Choice child members not enrolled with a HAN-affiliated PCMH | Source - SoonerCare Independent Evaluator<br><br>Steward – CAHPS | T-tests<br><br>Regression with propensity score matching |
| 65 | | Rating of personal doctor – children and adults | Adult HMP members<br><br>Child HMP members | In accordance with CAHPS specifications | SoonerCare Choice adult members not enrolled with a HAN-affiliated PCMH<br><br>SoonerCare Choice child members not enrolled with a HAN-affiliated PCMH | Source - SoonerCare Independent Evaluator data file<br><br>Steward – CAHPS | T-tests<br><br>Regression with propensity score matching |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| **Evaluation of Health Management Program – Cost Effectiveness** | | | | | | | |
| 66 | Will beneficiaries using HMP services have fewer ER visits as compared to beneficiaries not receiving HMP services (as measured through claims data)? | ER utilization – HMP members versus comparison group | SoonerCare HMP members (minimum of three months) | Numerator – ED visits<br><br>Denominator – total participants | SoonerCare Choice members not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source – MMIS<br><br>Steward – Independent Evaluator | T-tests<br><br>Regression with propensity score matching<br><br>Interrupted time series |
| 67 | Will beneficiaries using HMP services have fewer (admissions and) readmissions as compared to beneficiaries not receiving HMP services (as measured through claims data)? | Hospital admissions – HMP members versus comparison group<br><br>Hospital readmissions (30 days) – HMP members versus comparison group | SoonerCare HMP members (minimum of three months)<br><br>SoonerCare HMP members with at least one hospitalization | Numerator – Admissions<br><br>Denominator – total participants<br><br>Numerator – Unique members with readmissions within 30 days following an admission<br><br>Denominator- total members with admissions in 30-day period | SoonerCare Choice members not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP<br><br>HMP beneficiaries enrolled in second generation HMP | Source – MMIS<br><br>Steward – SoonerCare Independent Evaluator | T-tests<br><br>Regression with propensity score matching<br><br>Interrupted time series |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 68 | Will total and per member per month expenditures for members enrolled in HMP be lower than would have occurred absent their participation? | PMPM costs – HMP members versus comparison group | SoonerCare HMP members (minimum of three months) | Numerator – total expenditures (paid claims) and program administrative costs (vendor payments and agency direct/overhead expenses) Denominator – member months | SoonerCare Choice members not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP HMP beneficiaries enrolled in second generation HMP | Source – MMIS Steward – SoonerCare Independent Evaluator | T-tests Regression with propensity score matching Interrupted time series |
| | | | **Evaluation of Insure Oklahoma – Access to Care** | | | | |
| 69 | Will the evaluation support the hypothesis that Insure Oklahoma is improving access to care for low-income Oklahomans not eligible for Medicaid? | The number of individuals enrolled in Insure Oklahoma | Insure Oklahoma beneficiaries, both ESI and Individual Plan | N/A | N/A | Source – OHCA eligibility system Steward – OHCA | Descriptive statistics |
| 70 | | The number of employers participating in the ESI portion of Insure Oklahoma | Employers participating in the ESI portion of the program | N/A | N/A | Source – Insure Oklahoma Steward – OHCA | Descriptive statistics |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 71 | | The number of primary care providers participating in the Individual Plan portion of Insure Oklahoma | Primary care providers (PCMH providers) participating in the Individual Plan network | N/A | N/A | Source – MMIS<br><br>Steward – OHCA | Descriptive statistics |
| **Evaluation of Retroactive Eligibility – Access to Care** | | | | | | | |
| 72 | Do eligible people subject to retroactive eligibility waivers enroll in Medicaid at the same rate as other eligible people who have access to retroactive eligibility? | The number of individuals enrolled in Medicaid by eligibility group, by quarter | Beneficiaries subject to retroactive eligibility waiver<br><br><br><br>Beneficiaries newly covered by retroactive eligibility (non-disabled children under age 19 and pregnant women) | N/A | Non-pregnant adults covered by retroactive eligibility waiver<br><br><br><br>Beneficiaries previously subject to retroactive eligibility waiver | Source – OHCA eligibility system<br><br>Steward - OHCA | Regression with propensity score matching<br><br><br><br>Interrupted time series |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 73 | | The number of new enrollees in Medicaid by eligibility group, by quarter | Beneficiaries subject to retroactive eligibility waiver | N/A | Non-pregnant adults covered by retroactive eligibility waiver | Source – OHCA eligibility system<br><br>Steward - OHCA | Regression with propensity score matching |
| | | | Beneficiaries newly covered by retroactive eligibility (non-disabled children under age 19 and pregnant women) | | Beneficiaries previously subject to retroactive eligibility waiver | | Interrupted time series |
| 74 | What is the likelihood of enrollment continuity for those subject to a retroactive eligibility waiver compared to other Medicaid beneficiaries who have access to retroactive eligibility? | Probability of completing the renewal (recertification) process, by eligibility group | Beneficiaries subject to retroactive eligibility waiver | N/A | Non-pregnant adults covered by retroactive eligibility waiver | Source – OHCA eligibility system<br><br>Steward - OHCA | Regression with propensity score matching |
| | | | Beneficiaries newly covered by retroactive eligibility (non-disabled children under age 19 and pregnant women) | | Beneficiaries previously subject to retroactive eligibility waiver | | Interrupted time series |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 75 | | Probability of remaining enrolled in Medicaid for 12-, 18-24- consecutive months, by eligibility group | Beneficiaries subject to retroactive eligibility waiver | N/A | Non-pregnant adults covered by retroactive eligibility waiver | Source – OHCA eligibility system<br><br>Steward - OHCA | Regression with propensity score matching |
| | | | Beneficiaries newly covered by retroactive eligibility (non-disabled children under age 19 and pregnant women) | | Beneficiaries previously subject to retroactive eligibility waiver | | Interrupted time series |
| 76 | | Number of months with Medicaid coverage (average tenure) (1-12) | Beneficiaries subject to retroactive eligibility waiver | N/A | Non-pregnant adults covered by retroactive eligibility waiver | Source – OHCA eligibility system<br><br>Steward - OHCA | Regression with propensity score matching |
| | | | Beneficiaries newly covered by retroactive eligibility (non-disabled children under age 19 and pregnant women) | | Beneficiaries previously subject to retroactive eligibility waiver | | Interrupted time series |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 77 | Do beneficiaries subject to retroactive eligibility waivers who disenroll from Medicaid have shorter enrollment gaps than other beneficiaries who have access to retroactive eligibility? | Probability of re-enrolling in Medicaid after a gap in coverage of six months | Beneficiaries subject to retroactive eligibility waiver | N/A | Non-pregnant adults covered by retroactive eligibility waiver | Source – OHCA eligibility system<br><br>Steward - OHCA | Regression with propensity score matching |
| | | | Beneficiaries newly covered by retroactive eligibility (non-disabled children under age 19 and pregnant women) | | Beneficiaries previously subject to retroactive eligibility waiver | | Interrupted time series |
| 78 | | Number of months without Medicaid coverage, up to six months | Beneficiaries subject to retroactive eligibility waiver | N/A | Non-pregnant adults covered by retroactive eligibility waiver | Source – OHCA eligibility system<br><br>Steward - OHCA | Regression with propensity score matching |
| | | | Beneficiaries newly covered by retroactive eligibility (non-disabled children under age 19 and pregnant women) | | Beneficiaries previously subject to retroactive eligibility waiver | | Interrupted time series |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| **Evaluation of Retroactive Eligibility – Quality of Care** | | | | | | | |
| 79 | Do newly-enrolled beneficiaries subject to a waiver of retroactive eligibility have higher self-assessed health status than other newly enrolled beneficiaries who have access to retroactive eligibility? | Beneficiary self-reported health status; reported prior year utilization | Beneficiaries subject to retroactive eligibility waiver | N/A | Non-pregnant adults covered by retroactive eligibility waiver | Source – SoonerCare Independent Evaluator survey data file<br><br>Steward - SoonerCare Independent Evaluator for survey data | Descriptive regression model (due to lack of baseline data; waiver is ongoing from prior period) |
| 80 | Do beneficiaries subject to the retroactive eligibility waiver have better health outcomes than other beneficiaries who have access to retroactive eligibility? | Beneficiary self-reported health status; healthy days | Beneficiaries subject to retroactive eligibility waiver | N/A | Non-pregnant adults covered by retroactive eligibility waiver | Source – SoonerCare Independent Evaluator survey data file<br><br>Steward - SoonerCare Independent Evaluator for survey data | Regression with propensity score matching |

| Ref | Research Question | Measure | Population | Numerator/ Denominator | Comparison Group | Data Source & Measure Steward | Analytic Methods |
|---|---|---|---|---|---|---|---|
| 81 | | Change in physical and mental health status, measured at baseline and at 12, 18 and 24 months | Beneficiaries subject to retroactive eligibility waiver | N/A | Non-pregnant adults covered by retroactive eligibility waiver | Source – SoonerCare Independent Evaluator survey data file<br><br>Steward - SoonerCare Independent Evaluator for survey data | Regression model of change in self-reported health status among Medicaid beneficiaries initially enrolled and subject to waiver |

**Oklahoma SoonerCare Section 1115 Demonstration**

**CMS COMMENTS ON THE SUMMATIVE EVALUATION REPORT FOR THE PERIOD ENDING DECEMBER 31, 2018**

**September 29, 2020**

## I. Introduction

The Centers for Medicare & Medicaid Services (CMS) has reviewed Oklahoma's summative evaluation report, titled "SoonerCare Section 1115 Waiver Evaluation: Demonstration Years 21 – 23 (CY 2016 – 2018)," dated June 2020. The report evaluates Oklahoma's SoonerCare section 1115 demonstration for the demonstration period of January 1, 2016 through December 31, 2018. CMS compared the summative evaluation report to the demonstration special terms and conditions (STC)[87] and the evaluation design from the state[88].

The demonstration contains the following policies:

- SoonerCare Health Access Networks (HANs), which offer care management and care coordination to SoonerCare Choice members with complex health care needs who are enrolled with affiliated primary care medical home (PCMH) providers. HANs expanded to additional counties between 2016 and 2018, but the policy was otherwise unchanged from the previous demonstration period.

- SoonerCare Health Management Program (HMP), an initiative under the demonstration developed to offer care management to SoonerCare Choice members most at risk for chronic disease and other adverse health events. During the 2016–2018 period, HMP was unchanged from the previous demonstration period.

- The state continued to waive retroactive eligibility for most SoonerCare Choice beneficiaries but did not apply it to those eligible due to the Tax Equity and Fiscal Responsibility Act (TEFRA) or Aged, Blind or Disabled (ABD) status. During the 2016–2018 period, the retroactive eligibility waiver was unchanged from the previous demonstration period.

The goals of the demonstration are to improve enrollee health care access and quality and to increase cost-effectiveness.

CMS has identified strengths and weaknesses of the analyses contained in the summative evaluation report. The strengths of the evaluation are that the state uses a mix of claims and primary survey data and employs propensity score matching to select an in-state comparison

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[87] Three sets of STCs cover the 2016–2018 demonstration period: https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/ok/soonercare/ok-soonercare-2015-ext-appvl-07092015.pdf; https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/ok/soonercare/ok-soonercare-tech-crrctns-amdmnt-rqst-11302016.pdf; and https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/ok/soonercare/ok-soonercare-renewal-12292017.pdf.

[88] Evaluation Design available at: https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/ok/soonercare/ok-soonercare-draft-eval-design-20181228.pdf.

group among Oklahoma beneficiaries not enrolled in HAN or HMP.  The state also uses well-defined outcome measures that are appropriate for the research questions.  CMS has several recommendations for improving the methods, their description, and presentation of the results (Section II).  CMS has also identified a number of opportunities to strengthen the evaluation of the demonstration period August 31, 2018 through December 31, 2023[89] (Section III).  Upon CMS's review of this evaluation report, CMS also has identified a few areas where the state could consider certain minor amendments to the approved evaluation design for this period, dated June 2019.   These updates within the approved design framework will strengthen future evaluation efforts, including the interim and summative evaluation reports.  The state is not required to resubmit the evaluation design for these suggested modifications, but should accommodate those adjustments in evaluation of the ongoing demonstration approval period.  In accordance with STC 88 of the STCs for the January 1 to December 31, 2018 approval period, CMS anticipates receiving a revised summative evaluation report from the state within 60 days after it receives CMS comments.

**II. Recommendations for improvements to the summative evaluation report**
<span style="color:red">The OHCA appreciates CMS' recommendations for improving the summative evaluation report. We have worked with our independent evaluator to incorporate the recommendations in the manner described below.</span>

1.  **Provide more details about the propensity score matching process used to select the comparison groups and other analytic methods.**

The report describes the beneficiary characteristics that are included in the matching process but does not provide any comparison of summary statistics for the intervention and comparison groups.  The state should consider adding balance tables that display mean beneficiary characteristics for treatment and comparison group, before and after matching.  The balance tables would help persuade the reader that the treatment and comparison groups are observably similar after matching.  In addition, the state should describe the matching algorithm in more detail, for example, whether the evaluator used matching with or without replacement and which distance measure was used for matching.  The summative evaluation report also mentions "peer grouping" on page 50 but does not explain elsewhere what this is.  If this references a specific statistical method, the state should describe it in more detail.

<span style="color:red">The matching process description has been expanded in the report methodology section to address the elements identified by CMS. (Nearest neighbor PSM without replacement was utilized.) Report Appendix 2 also now contains balance table data depicting mean beneficiary characteristics (treatment and comparison group) and standardized difference. (Post-matching data is presented to allow readers to assess the similarity of treatment and comparison groups.) The "peer grouping" reference has been removed.</span>

2.  **Describe the results only in terms of statistically significant findings when assessing whether the data supports each hypothesis.**

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[89] The STCs for 2019–2023 can be found at: https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/ok/soonercare/ok-soonercare-demo-appvl-20180831.pdf.

In the section describing the hypothesis that HANs would improve beneficiary access on page 152 of the summative evaluation report, the state notes that, "The SoonerCare HAN and comparison group rates did not differ by a statistically significant amount on the majority of measures, and this typically would argue against a conclusion that the evaluation supported the hypothesis. However, the compliance and satisfaction rates were very high in absolute terms, and also relative to the national benchmark." The state then uses this to argue that HANs improved access to care, a conclusion that is not supported by the data. The state should revise this statement to reflect the fact that no conclusion about the impact of HANs on beneficiary access can be drawn, given lack of statistically significant findings.

The report has been revised to clarify that no conclusion about the impact of HANs on beneficiary access can be drawn from the evaluation measures, given the lack of statistically significant findings.

The discussion of absolute compliance/satisfaction rates, and performance against national benchmarks, has been retained as it is relevant to Oklahoma policymakers when assessing the Oklahoma Medicaid program in its entirety. However, the language has been revised to clarify why the information is provided. The report also has been revised to include cautionary language regarding differences in the Oklahoma waiver and national benchmark populations. This language appears throughout the report whenever benchmark data is presented or discussed.

## 3. Add a disclaimer that results should not be interpreted as causal.

Because the demonstration continued the same policies during the 2016–2018 period that existed before 2016, the state cannot use an evaluation design that supports causal inferences about the effects of demonstration policies, such as difference-in-differences. Therefore, the findings in the summative evaluation report should not be interpreted as causal evidence for the impacts of this demonstration. The state does not claim causality in its interpretation of the findings but should add an explicit reference to the descriptive nature of the results.

As noted above, the evaluation report did not claim causality. Per CMS' request, an explicit reference to the descriptive nature of the results has been added both to the executive summary and methodological limitations section of the report.

4.  **Consider pooling three years of data, 2016–2018, and reporting results for the pooled sample as the main results.**

The state should consider reporting only results from the pooled three-year period in the main text of the report and relegate the results for each individual year to an appendix. The evaluation report currently assesses many outcomes (at least 68) up to three times (2016, 2017, and 2018) each. The state nicely organizes the outcomes by demonstration policy and hypothesis, and then summarizes the high-level findings at the conclusion of each section of results, but the results could be more concisely presented using a pooled sample. Although it is interesting to see trends over three years in some cases, most are flat or display no strong trendline, and therefore reporting results for separate years is not very informative. Pooling multiple years of data would also increase statistical power.

The revised report contains pooled three-year rates for all HEDIS measures, as well as all utilization and cost measures. (The individual year-over-year rates are still available in Appendix 2 of the report.)

5.  **Correct for multiple comparison tests.**

The state currently presents a large number of statistical tests (greater than 200) without noting any kind of statistical correction to account for the risk of false discoveries. Without adjustment for multiple comparisons, this means that several of the findings are likely statistically significant purely by chance.[90] Pooling the three years will reduce the number of hypothesis tests significantly, but the state should also account for multiple comparisons by using correction methods to decrease the likelihood of a false positive.[4]

The revised evaluation report adopts CMS' recommendation of using pooling to reduce the number of discrete hypothesis tests. The state's independent evaluator did not make additional statistical corrections but did include a cautionary note for readers concerning false positives both in the executive summary and methodological limitations section of the report.

6.  **Consider dropping the comparison to Core Set benchmarks when comparison groups are available.**

The Core Set comparison group is very different from the HAN and HMP populations and inferior to the in-state matched comparison group because the state cannot match or regression-adjust the Core Set comparison to make it more similar to the demonstration population. The median value is an interesting benchmark that could be included in the tables for context, but it should not be used as evidence that the demonstration did or did not meet its goals, especially when an in-state comparison group is available.

As noted previously, the national benchmark data is of interest to Oklahoma policymakers when evaluating the relative performance of the state's Medicaid program. (Oklahoma has been a

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[90] See the discussion of multiple comparisons here: https://www.medicaid.gov/medicaid/section-1115-demo/downloads/evaluation-reports/causal-inference.pdf.

strong supporter of the CMS Scorecard initiative for this same reason.) However, the report has been revised to include cautionary language regarding differences in the Oklahoma waiver and national benchmark populations. This language appears throughout the report whenever benchmark data is presented or discussed.

7. **For each demonstration component, provide a concise, high-level summary of relevant results from previous evaluation reports to place analyses in context.**

CMS requests that the state add a high-level summary of key evaluation results and their implications, including results from earlier reports. Given that the HAN, HMP, and retroactive eligibility waiver components have been ongoing and largely unchanged for many years, the state should summarize the findings from the previous evaluations alongside new results. This summary should incorporate the level of confidence the evaluators place in different sets of prior results.

The evaluation design used for 2016 – 2018 is based on the latest CMS guidance and differs greatly in comprehensiveness and statistical rigor from earlier evaluations. Going forward, it will be possible to make comparisons across waiver periods for the majority of measures contained in this report.

The retroactive eligibility waiver similarly has changed in terms of covered populations over time. For the current waiver cycle, the OHCA is adopting the design guidelines issued by CMS for such waivers.

Although it would be problematic to link this evaluation formally to prior evaluations, the revised report contains a new appendix with data from the most recent HAN and HMP evaluations pre-dating the 2016 – 2018 evaluation period. The prior period data is compared to corresponding data for the 2016 – 2018 evaluation, where applicable, and summary findings are presented. A link to the section of the OHCA website holding the prior period evaluation reports also is included.

8. **Correct minor errors and typos.**

There are two minor issues that the state should correct:
   a) (p. 26) Exhibit 8a appears to have a typo. The aim is listed as "provide cost effective care" when it should be "improve access and quality." There may also be changes required for the primary and secondary drivers, which look quite similar for both Exhibits 8a and 8b.
   b) (p. 84) In exhibit 48, "Tier 2" is listed twice. One of these should likely be "Tier 1."

   Corrections made. (Note – primary and secondary drivers in Exhibits 8a and 8b intentionally overlap. The drivers contribute to all three Demonstration aims.)


**III. Considerations for future demonstration evaluations**
We concur with both of CMS' recommendations below and will work to incorporate them into the next cycle.

9. **The state should consider using multiple matching approaches to assess the sensitivity of the results to each set of matching assumptions.**

In addition to propensity score matching, the state should consider using another matching algorithm, such as coarsened exact matching, especially if the evaluators continue to use a small number of covariates that can be expressed as categorical variables. Coarsened exact matching and similar techniques are preferred to propensity score matching in cases where there are few matching variables and should be at least considered as a sensitivity check.

**10. The state should consider additional variables for the matching process.**

Currently, the state uses a small number of demographic characteristics to match demonstration and comparison beneficiaries, but there are more covariates available in Medicaid eligibility and claims data, and in other data sets that can be linked by geographic area such as county or zip code. The state should consider all or some of the following to improve the match quality:

- Beneficiary level: Medicaid eligibility category, beneficiary race, a risk adjustment score such as the Chronic Illness and Disability Payment System (CDPS), chronic condition indicators, and length of continuous Medicaid enrollment.

- Provider practice level: academic affiliation, hospital system affiliation or independent practice, and practice size.

- County, zip code, or Census block group level: median income, poverty rate, education level.

## Deviations from Approved Design Measure Set

| Measure Reference Number | Population | Measure Description | Notes |
|---|---|---|---|
| 7 | HAN | Asthma – use of appropriate medications for people with asthma | Measure was retired. Replaced with successor measure – asthma medication ratio |
| 8 | HAN | Asthma – medication management for people with asthma – 75 percent | Measure was retired. Replaced with successor measure – asthma medication ratio |
| 18 | HAN | Diabetes – percentage of members prescribed ACE/ARB therapy | Measure was retired. No replacement |
| 22 | HAN | Hypertension – percentage of members prescribed ACE/ARB therapy or diuretics with annual medication monitoring | Measure was retired. No replacement |
| 26 | HAN | Number and percentage of HAN-affiliated PCMH providers who have attained the highest level of OHCA accreditation | Measure calculated based on counts of beneficiaries aligned with PCMH providers at each tier level, rather than PCMH provider counts |
| 33 | HMP | Number of PCP contacts (total and per member engaged in health coaching) | Replaced with two HEDIS preventive/ambulatory care measures – child and adolescent access to PCPs – 12 months to 19 years and adult access to preventive/ambulatory health services |
| 36 | HMP | Asthma – use of appropriate medications for people with asthma | Measure was retired. Replaced with successor measure – asthma medication ratio |
| 37 | HMP | Asthma – medication management for people with asthma – 75 percent | Measure was retired. Replaced with successor measure – asthma medication ratio |
| 38 | HMP | Asthma – COPD or asthma in older adults admission rate | Measure was not reported due to sample size concerns. Will be re-examined for summative evaluation |
| 39 | HMP | Asthma – asthma in younger adults admission rate | Measure was not reported due to sample size concerns. Will be re-examined for summative evaluation |

| Measure Reference Number | Population | Measure Description | Notes |
|---|---|---|---|
| 42 | HMP | CAD – heart failure admission rate | Measure was not reported due to sample size concerns. Will be re-examined for summative evaluation |
| 50 | HMP | Diabetes – percentage of members prescribed ACE/ARB therapy | Measure was retired. No replacement |
| 51 | HMP | Diabetes – short term complications admission rate | Measure was not reported due to sample size concerns. Will be re-examined for summative evaluation |
| 55 | HMP | Hypertension – percentage of members prescribed ACE/ARB therapy or diuretics with annual medication monitoring | Measure was retired. No replacement |
| 56 | HMP | Mental Health – follow-up after hospitalization for mental illness – 7 days | Measure was not reported due to sample size concerns. Will be re-examined for summative evaluation |
| 57 | HMP | Mental Health – follow-up after hospitalization for mental illness – 30 days | Measure was not reported due to sample size concerns. Will be re-examined for summative evaluation |
| 65 | HMP | Rating of personal doctor – children and adults | Measure (survey question) was not asked, as HMP does not influence choice of doctor |
| 69 | Insure OK | Number of individuals enrolled in Insure OK | Enrollment data included in Background section of report. Measure not reported in Results due to phase-out of majority of program following eligibility expansion |
| 70 | Insure OK | Number of employers participating in the ESI portion of Insure OK | Participation data included in Background section of report. Measure not reported in Results due to phase-out of majority of program following eligibility expansion |
| 71 | Insure OK | PCPs participating in the Individual Plan portion of Insure OK | Not evaluated |

| Measure Reference Number | Population | Measure Description | Notes |
|---|---|---|---|
| 74 | Retroactive Eligibility | Probability of completing the renewal (recertification) process, by eligibility group | Data not available for interim evaluation. Will be included in summative evaluation if obtainable |
| 75 | Retroactive Eligibility | Probability of remaining enrolled in Medicaid for 12-, 18-, 12-consecutive months, by eligibility group | Not evaluated due to suspension of most disenrollments under PHE. Will be evaluated for post-PHE period and included in summative evaluation report |
| 76 | Retroactive Eligibility | Number of months with Medicaid coverage (average tenure) | Not evaluated due to suspension of most disenrollments under PHE. Will be evaluated for post-PHE period and included in summative evaluation report |
| 77 | Retroactive Eligibility | Probability of re-enrolling in Medicaid after a gap in coverage of six months | Not evaluated due to suspension of most disenrollments under PHE. Will be evaluated for post-PHE period and included in summative evaluation report |
| 78 | Retroactive Eligibility | Number of months without Medicaid coverage, up to six months | Not evaluated due to suspension of most disenrollments under PHE. Will be evaluated for post-PHE period and included in summative evaluation report |

## 2. *HAN CEM Covariate Balance Tables (Pre- and Post-Matching) 2019 - 2021*

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | 2019 All Data (pre-balancing) | | | 2019 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN General Mean | Comparison Mean | Standardized Difference | HAN General Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **Asthma - Medication Ratio - 5 to 18 years** | | | | | | |
| Age | 10.902 | 11.073 | -0.044 | 10.902 | 10.902 | 0.000 |
| Gender (0 = male; 1 = female) | 0.487 | 0.493 | -0.011 | 0.487 | 0.487 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.230 | 0.581 | -0.835 | 0.230 | 0.230 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.046 | 0.038 | 0.039 | 0.046 | 0.046 | 0.000 |
| **Asthma - Medication Ratio - 19 to 64 years** | | | | | | |
| Age | 38.623 | 38.670 | -0.004 | 38.623 | 38.621 | 0.000 |
| Sex (0 = male; 1 = female) | 0.702 | 0.689 | 0.030 | 0.702 | 0.702 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.235 | 0.600 | -0.860 | 0.235 | 0.235 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.440 | 0.428 | 0.024 | 0.440 | 0.440 | 0.000 |
| **CAD - Persistent Beta-Blocker Treatment after a Heart Attack** | | | | | | |
| Age | 54.160 | 54.758 | -0.071 | 54.489 | 54.514 | -0.003 |
| Sex (0 = male; 1 = female) | 0.446 | 0.526 | -0.160 | 0.450 | 0.450 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.241 | 0.620 | -0.888 | 0.239 | 0.239 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.850 | 0.831 | 0.053 | 0.855 | 0.855 | 0.000 |
| **CAD - Cholesterol Management - LDL-C Test** | *Same population as CAD Beta Blocker* | | | *Same population as CAD Beta Blocker* | | |
| Age | 54.160 | 54.758 | -0.071 | 54.489 | 54.514 | -0.003 |
| Sex (0 = male; 1 = female) | 0.446 | 0.526 | -0.160 | 0.450 | 0.450 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.241 | 0.620 | -0.888 | 0.239 | 0.239 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.850 | 0.831 | 0.053 | 0.855 | 0.855 | 0.000 |

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | 2019 All Data (pre-balancing) | | | 2019 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN General Mean | Comparison Mean | Standardized Difference | HAN General Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **COPD - Use of Spirometry Testing** | | | | | | |
| Age | 43.993 | 46.804 | -0.151 | 44.343 | 44.392 | -0.003 |
| Sex (0 = male; 1 = female) | 0.622 | 0.626 | -0.008 | 0.623 | 0.623 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.246 | 0.648 | -0.934 | 0.244 | 0.244 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.648 | 0.656 | -0.016 | 0.648 | 0.648 | 0.000 |
| | | | | | | |
| **COPD - Pharmacotherapy Management of Exacerbation - 14 days** | | | | | | |
| Age | 54.674 | 52.715 | 0.224 | 55.023 | 54.987 | 0.004 |
| Sex (0 = male; 1 = female) | 0.639 | 0.684 | -0.093 | 0.653 | 0.653 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.274 | 0.630 | -0.797 | 0.275 | 0.275 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.878 | 0.837 | 0.127 | 0.901 | 0.901 | 0.000 |
| | | | | | | |
| **COPD - Pharmacotherapy Management of Exacerbation - 30 days** | *Same population as 14 days* | | | *Same population as 14 days* | | |
| Age | 54.674 | 52.715 | 0.224 | 55.023 | 54.987 | 0.004 |
| Sex (0 = male; 1 = female) | 0.639 | 0.684 | -0.093 | 0.653 | 0.653 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.274 | 0.630 | -0.797 | 0.275 | 0.275 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.878 | 0.837 | 0.127 | 0.901 | 0.901 | 0.000 |
| | | | | | | |
| **Diabetes - Members who had LDL-C Test** | | | | | | |
| Age | 47.353 | 47.676 | -0.027 | 47.411 | 47.359 | 0.004 |
| Sex (0 = male; 1 = female) | 0.653 | 0.652 | 0.002 | 0.654 | 0.654 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.237 | 0.617 | -0.895 | 0.238 | 0.238 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.667 | 0.688 | -0.046 | 0.669 | 0.669 | 0.000 |
| | | | | | | |
| **Diabetes - Retinal Eye Exam** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 47.353 | 47.676 | -0.027 | 47.411 | 47.359 | 0.004 |
| Sex (0 = male; 1 = female) | 0.653 | 0.652 | 0.002 | 0.654 | 0.654 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.237 | 0.617 | -0.895 | 0.238 | 0.238 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.667 | 0.688 | -0.046 | 0.669 | 0.669 | 0.000 |

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | 2019 All Data (pre-balancing) | | | 2019 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN General Mean | Comparison Mean | Standardized Difference | HAN General Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **Diabetes - HbA1c Testing** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 47.353 | 47.676 | -0.027 | 47.411 | 47.359 | 0.004 |
| Sex (0 = male; 1 = female) | 0.653 | 0.652 | 0.002 | 0.654 | 0.654 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.237 | 0.617 | -0.895 | 0.238 | 0.238 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.667 | 0.688 | -0.046 | 0.669 | 0.669 | 0.000 |
| **Diabetes - Medical Attention for Nephropathy** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 47.353 | 47.676 | -0.027 | 47.411 | 47.359 | 0.004 |
| Sex (0 = male; 1 = female) | 0.653 | 0.652 | 0.002 | 0.654 | 0.654 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.237 | 0.617 | -0.895 | 0.238 | 0.238 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.667 | 0.688 | -0.046 | 0.669 | 0.669 | 0.000 |
| **Hypertension - LDL-C Test** | | | | | | |
| Age | 49.262 | 49.071 | 0.017 | 49.245 | 49.247 | 0.000 |
| Sex (0 = male; 1 = female) | 0.623 | 0.612 | 0.023 | 0.623 | 0.623 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.231 | 0.607 | -0.892 | 0.231 | 0.231 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.689 | 0.684 | 0.010 | 0.688 | 0.688 | 0.000 |
| **Hypertension - ACE/ARB Therapy** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 49.262 | 49.071 | 0.017 | 49.245 | 49.247 | 0.000 |
| Sex (0 = male; 1 = female) | 0.623 | 0.612 | 0.023 | 0.623 | 0.623 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.231 | 0.607 | -0.892 | 0.231 | 0.231 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.689 | 0.684 | 0.010 | 0.688 | 0.688 | 0.000 |
| **Mental Health - Follow-up after Hospitalization - 7 days - 6 to 20** | | | | | | |
| Age | 13.662 | 14.213 | -0.178 | 13.687 | 13.719 | -0.010 |
| Sex (0 = male; 1 = female) | 0.527 | 0.558 | -0.061 | 0.527 | 0.527 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.254 | 0.518 | -0.607 | 0.255 | 0.255 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.150 | 0.145 | 0.015 | 0.141 | 0.141 | 0.000 |

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | 2019 All Data (pre-balancing) | | | 2019 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN General Mean | Comparison Mean | Standardized Difference | HAN General Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **Mental Health - Follow-up after Hospitalization - 7 days - 21 and older** | | | | | | |
| Age | 41.437 | 41.238 | 0.017 | 41.413 | 41.335 | 0.007 |
| Sex (0 = male; 1 = female) | 0.665 | 0.653 | 0.024 | 0.677 | 0.677 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.234 | 0.452 | -0.513 | 0.232 | 0.232 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.741 | 0.694 | 0.107 | 0.755 | 0.755 | 0.000 |
| **Mental Health - Follow-up after Hospitalization - 30 days - 6 to 20** | *Same population as 7 days - 6 to 20* | | | *Same population as 7 days - 6 to 20* | | |
| Age | 13.662 | 14.213 | -0.178 | 13.687 | 13.719 | -0.010 |
| Sex (0 = male; 1 = female) | 0.527 | 0.558 | -0.061 | 0.527 | 0.527 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.254 | 0.518 | -0.607 | 0.255 | 0.255 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.150 | 0.145 | 0.015 | 0.141 | 0.141 | 0.000 |
| **Mental Health - Follow-up after Hospitalization - 30 days - 21 and older** | *Same population as 7 days - 21 and older* | | | *Same population as 7 days - 21 and older* | | |
| Age | 41.437 | 41.238 | 0.017 | 41.413 | 41.335 | 0.007 |
| Sex (0 = male; 1 = female) | 0.665 | 0.653 | 0.024 | 0.677 | 0.677 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.234 | 0.452 | -0.513 | 0.232 | 0.232 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.741 | 0.694 | 0.107 | 0.755 | 0.755 | 0.000 |
| **Child and Adolescents' Access to PCP - 12 months to 19 years** | | | | | | |
| Age | 8.777 | 9.025 | -0.049 | 8.777 | 8.777 | 0.000 |
| Sex (0 = male; 1 = female) | 0.487 | 0.492 | -0.010 | 0.487 | 0.487 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.232 | 0.576 | -0.816 | 0.232 | 0.232 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.039 | 0.033 | 0.031 | 0.039 | 0.039 | 0.000 |
| **Adults' Access to Preventive/Ambulatory Health Services** | | | | | | |
| Age | 39.736 | 39.761 | -0.002 | 39.731 | 39.742 | -0.001 |
| Sex (0 = male; 1 = female) | 0.708 | 0.694 | 0.032 | 0.708 | 0.708 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.235 | 0.598 | -0.857 | 0.235 | 0.235 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.453 | 0.441 | 0.024 | 0.453 | 0.453 | 0.000 |

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | 2019 All Data (pre-balancing) | | | 2019 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN General Mean | Comparison Mean | Standardized Difference | HAN General Mean | Comparison Mean | Standardized Difference |
| *Utilization/Expenditure Measures* | | | | | | |
| **Emergency Room Visits (per 1,000 member months) - All** | | | | | | |
| Age | 12.656 | 13.419 | -0.066 | 12.642 | 12.653 | 0.000 |
| Sex | 0.508 | 0.518 | -0.019 | 0.508 | 0.508 | 0.000 |
| Urban/Rural | 0.224 | 0.564 | -0.816 | 0.224 | 0.224 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.097 | 0.098 | -0.002 | 0.097 | 0.097 | 0.000 |
| **Hospital Admissions (per 100,000 member months) - All** | *Same population as ER visits* | | | *Same population as ER visits* | | |
| Age | 12.656 | 13.419 | -0.066 | 12.642 | 12.653 | 0.000 |
| Sex | 0.508 | 0.518 | -0.019 | 0.508 | 0.508 | 0.000 |
| Urban/Rural | 0.224 | 0.564 | -0.816 | 0.224 | 0.224 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.097 | 0.098 | -0.002 | 0.097 | 0.097 | 0.000 |
| **Per Member Per Month Expenditures - All** | *Same population as ER visits* | | | *Same population as ER visits* | | |
| Age | 12.656 | 13.419 | -0.066 | 12.642 | 12.653 | 0.000 |
| Sex | 0.508 | 0.518 | -0.019 | 0.508 | 0.508 | 0.000 |
| Urban/Rural | 0.224 | 0.564 | -0.816 | 0.224 | 0.224 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.097 | 0.098 | -0.002 | 0.097 | 0.097 | 0.000 |

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | 2020 All Data (pre-balancing) | | | 2020 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN General Mean | Comparison Mean | Standardized Difference | HAN General Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **Asthma - Medication Ratio - 5 to 18 years** | | | | | | |
| Age | 10.949 | 11.139 | -0.048 | 10.949 | 10.949 | 0.000 |
| Gender (0 = male; 1 = female) | 0.487 | 0.492 | -0.010 | 0.487 | 0.487 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.224 | 0.576 | -0.845 | 0.224 | 0.224 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.042 | 0.034 | 0.039 | 0.042 | 0.042 | 0.000 |
| | | | | | | |
| **Asthma - Medication Ratio - 19 to 64 years** | | | | | | |
| Age | 34.995 | 35.222 | -0.018 | 34.995 | 34.987 | 0.001 |
| Sex (0 = male; 1 = female) | 0.707 | 0.699 | 0.016 | 0.707 | 0.707 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.240 | 0.580 | -0.798 | 0.240 | 0.240 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.309 | 0.285 | 0.052 | 0.309 | 0.309 | 0.000 |
| | | | | | | |
| **CAD - Persistent Beta-Blocker Treatment after a Heart Attack** | | | | | | |
| Age | 54.331 | 55.551 | -0.139 | 54.651 | 54.751 | -0.006 |
| Sex (0 = male; 1 = female) | 0.484 | 0.509 | -0.050 | 0.488 | 0.488 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.290 | 0.623 | -0.734 | 0.291 | 0.291 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.814 | 0.824 | -0.025 | 0.817 | 0.817 | 0.000 |
| | | | | | | |
| **CAD - Cholesterol Management - LDL-C Test** | *Same population as CAD Beta Blocker* | | | *Same population as CAD Beta Blocker* | | |
| Age | 54.331 | 55.551 | -0.139 | 54.651 | 54.751 | -0.006 |
| Sex (0 = male; 1 = female) | 0.484 | 0.509 | -0.050 | 0.488 | 0.488 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.290 | 0.623 | -0.734 | 0.291 | 0.291 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.814 | 0.824 | -0.025 | 0.817 | 0.817 | 0.000 |

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | 2020 All Data (pre-balancing) | | | 2020 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN General Mean | Comparison Mean | Standardized Difference | HAN General Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **COPD - Use of Spirometry Testing** | | | | | | |
| Age | 27.767 | 37.031 | -0.405 | 27.804 | 27.815 | -0.001 |
| Sex (0 = male; 1 = female) | 0.502 | 0.553 | -0.102 | 0.504 | 0.504 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.239 | 0.611 | -0.874 | 0.241 | 0.241 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.401 | 0.527 | -0.257 | 0.397 | 0.397 | 0.000 |
| | | | | | | |
| **COPD - Pharmacotherapy Management of Exacerbation - 14 days** | | | | | | |
| Age | 52.310 | 53.066 | -0.075 | 53.719 | 53.871 | -0.015 |
| Sex (0 = male; 1 = female) | 0.652 | 0.645 | 0.015 | 0.685 | 0.685 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.228 | 0.585 | -0.851 | 0.233 | 0.233 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.798 | 0.821 | -0.058 | 0.815 | 0.815 | 0.000 |
| | | | | | | |
| **COPD - Pharmacotherapy Management of Exacerbation - 30 days** | *Same population as 14 days* | | | *Same population as 14 days* | | |
| Age | 52.310 | 53.066 | -0.075 | 53.719 | 53.871 | -0.015 |
| Sex (0 = male; 1 = female) | 0.652 | 0.645 | 0.015 | 0.685 | 0.685 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.228 | 0.585 | -0.851 | 0.233 | 0.233 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.798 | 0.821 | -0.058 | 0.815 | 0.815 | 0.000 |
| | | | | | | |
| **Diabetes - Members who had LDL-C Test** | | | | | | |
| Age | 46.382 | 46.351 | 0.003 | 46.420 | 46.398 | 0.002 |
| Sex (0 = male; 1 = female) | 0.659 | 0.667 | -0.017 | 0.660 | 0.660 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.244 | 0.597 | -0.821 | 0.245 | 0.245 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.601 | 0.586 | 0.030 | 0.602 | 0.602 | 0.000 |
| | | | | | | |
| **Diabetes - Retinal Eye Exam** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 46.382 | 46.351 | 0.003 | 46.420 | 46.398 | 0.002 |
| Sex (0 = male; 1 = female) | 0.659 | 0.667 | -0.017 | 0.660 | 0.660 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.244 | 0.597 | -0.821 | 0.245 | 0.245 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.601 | 0.586 | 0.030 | 0.602 | 0.602 | 0.000 |

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | 2020 All Data (pre-balancing) | | | 2020 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN General Mean | Comparison Mean | Standardized Difference | HAN General Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **Diabetes - HbA1c Testing** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 46.382 | 46.351 | 0.003 | 46.420 | 46.398 | 0.002 |
| Sex (0 = male; 1 = female) | 0.659 | 0.667 | -0.017 | 0.660 | 0.660 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.244 | 0.597 | -0.821 | 0.245 | 0.245 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.601 | 0.586 | 0.030 | 0.602 | 0.602 | 0.000 |
| **Diabetes - Medical Attention for Nephropathy** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 46.382 | 46.351 | 0.003 | 46.420 | 46.398 | 0.002 |
| Sex (0 = male; 1 = female) | 0.659 | 0.667 | -0.017 | 0.660 | 0.660 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.244 | 0.597 | -0.821 | 0.245 | 0.245 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.601 | 0.586 | 0.030 | 0.602 | 0.602 | 0.000 |
| **Hypertension - LDL-C Test** | | | | | | |
| Age | 48.229 | 47.621 | 0.053 | 48.221 | 48.226 | 0.000 |
| Sex (0 = male; 1 = female) | 0.630 | 0.624 | 0.013 | 0.630 | 0.630 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.236 | 0.588 | -0.830 | 0.236 | 0.236 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.620 | 0.584 | 0.075 | 0.620 | 0.620 | 0.000 |
| **Hypertension - ACE/ARB Therapy** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 48.229 | 47.621 | 0.053 | 48.221 | 48.226 | 0.000 |
| Sex (0 = male; 1 = female) | 0.630 | 0.624 | 0.013 | 0.630 | 0.630 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.236 | 0.588 | -0.830 | 0.236 | 0.236 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.620 | 0.584 | 0.075 | 0.620 | 0.620 | 0.000 |
| **Mental Health - Follow-up after Hospitalization - 7 days - 6 to 20** | | | | | | |
| Age | 14.221 | 14.713 | -0.163 | 14.334 | 14.332 | 0.001 |
| Sex (0 = male; 1 = female) | 0.593 | 0.597 | -0.008 | 0.608 | 0.608 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.255 | 0.570 | -0.723 | 0.262 | 0.262 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.130 | 0.115 | 0.047 | 0.097 | 0.097 | 0.000 |

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | 2020 All Data (pre-balancing) | | | 2020 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN General Mean | Comparison Mean | Standardized Difference | HAN General Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **Mental Health - Follow-up after Hospitalization - 7 days - 21 and older** | | | | | | |
| Age | 41.840 | 38.969 | 0.206 | 41.400 | 41.203 | 0.014 |
| Sex (0 = male; 1 = female) | 0.733 | 0.620 | 0.256 | 0.757 | 0.757 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.267 | 0.519 | -0.572 | 0.229 | 0.229 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.653 | 0.659 | -0.012 | 0.657 | 0.657 | 0.000 |
| | | | | | | |
| **Mental Health - Follow-up after Hospitalization - 30 days - 6 to 20** | *Same population as 7 days - 6 to 20* | | | *Same population as 7 days - 6 to 20* | | |
| Age | 14.221 | 14.713 | -0.163 | 14.334 | 14.332 | 0.001 |
| Sex (0 = male; 1 = female) | 0.593 | 0.597 | -0.008 | 0.608 | 0.608 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.255 | 0.570 | -0.723 | 0.262 | 0.262 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.130 | 0.115 | 0.047 | 0.097 | 0.097 | 0.000 |
| | | | | | | |
| **Mental Health - Follow-up after Hospitalization - 30 days - 21 and older** | *Same population as 7 days - 21 and older* | | | *Same population as 7 days - 21 and older* | | |
| Age | 41.840 | 38.969 | 0.206 | 41.400 | 41.203 | 0.014 |
| Sex (0 = male; 1 = female) | 0.733 | 0.620 | 0.256 | 0.757 | 0.757 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.267 | 0.519 | -0.572 | 0.229 | 0.229 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.653 | 0.659 | -0.012 | 0.657 | 0.657 | 0.000 |
| | | | | | | |
| **Child and Adolescents' Access to PCP - 12 months to 19 years** | | | | | | |
| Age | 8.938 | 9.254 | -0.060 | 8.938 | 8.938 | 0.000 |
| Sex (0 = male; 1 = female) | 0.487 | 0.493 | -0.012 | 0.487 | 0.487 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.225 | 0.574 | -0.835 | 0.225 | 0.225 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.035 | 0.029 | 0.033 | 0.035 | 0.035 | 0.000 |
| | | | | | | |
| **Adults' Access to Preventive/Ambulatory Health Services** | | | | | | |
| Age | 37.833 | 37.771 | 0.005 | 37.832 | 37.845 | -0.011 |
| Sex (0 = male; 1 = female) | 0.739 | 0.725 | 0.031 | 0.739 | 0.739 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.240 | 0.578 | -0.792 | 0.240 | 0.240 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.351 | 0.320 | 0.066 | 0.351 | 0.351 | 0.000 |

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | 2020 All Data (pre-balancing) | | | 2020 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN General Mean | Comparison Mean | Standardized Difference | HAN General Mean | Comparison Mean | Standardized Difference |
| *Utilization/Expenditure Measures* | | | | | | |
| **Emergency Room Visits (per 1,000 member months) - All** | | | | | | |
| Age | 12.444 | 13.515 | -0.098 | 12.430 | 12.446 | -0.001 |
| Sex | 0.509 | 0.519 | -0.019 | 0.509 | 0.509 | 0.000 |
| Urban/Rural | 0.222 | 0.574 | -0.848 | 0.222 | 0.222 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.084 | 0.087 | -0.010 | 0.084 | 0.084 | 0.000 |
| **Hospital Admissions (per 100,000 member months) - All** | *Same population as ER visits* | | | *Same population as ER visits* | | |
| Age | 12.444 | 13.515 | -0.098 | 12.430 | 12.446 | -0.001 |
| Sex | 0.509 | 0.519 | -0.019 | 0.509 | 0.509 | 0.000 |
| Urban/Rural | 0.222 | 0.574 | -0.848 | 0.222 | 0.222 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.084 | 0.087 | -0.010 | 0.084 | 0.084 | 0.000 |
| **Per Member Per Month Expenditures - All** | *Same population as ER visits* | | | *Same population as ER visits* | | |
| Age | 12.444 | 13.515 | -0.098 | 12.430 | 12.446 | -0.001 |
| Sex | 0.509 | 0.519 | -0.019 | 0.509 | 0.509 | 0.000 |
| Urban/Rural | 0.222 | 0.574 | -0.848 | 0.222 | 0.222 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.084 | 0.087 | -0.010 | 0.084 | 0.084 | 0.000 |

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | 2021 All Data (pre-balancing) | | | 2021 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN General Mean | Comparison Mean | Standardized Difference | HAN General Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **Asthma - Medication Ratio - 5 to 18 years** | | | | | | |
| Age | 11.077 | 11.257 | -0.045 | 11.077 | 11.077 | 0.000 |
| Gender (0 = male; 1 = female) | 0.487 | 0.491 | -0.008 | 0.487 | 0.487 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.232 | 0.589 | -0.846 | 0.232 | 0.232 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.037 | 0.029 | 0.042 | 0.037 | 0.037 | 0.000 |
| | | | | | | |
| **Asthma - Medication Ratio - 19 to 64 years** | | | | | | |
| Age | 33.535 | 33.357 | 0.014 | 33.535 | 33.462 | 0.006 |
| Sex (0 = male; 1 = female) | 0.671 | 0.688 | -0.035 | 0.671 | 0.671 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.245 | 0.594 | -0.811 | 0.245 | 0.245 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.137 | 0.233 | -0.276 | 0.137 | 0.137 | 0.000 |
| | | | | | | |
| **CAD - Persistent Beta-Blocker Treatment after a Heart Attack** | | | | | | |
| Age | 55.207 | 55.940 | -0.085 | 55.244 | 55.524 | -0.001 |
| Sex (0 = male; 1 = female) | 0.499 | 0.501 | -0.005 | 0.501 | 0.501 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.232 | 0.622 | -0.923 | 0.238 | 0.238 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.814 | 0.824 | -0.025 | 0.817 | 0.817 | 0.000 |
| | | | | | | |
| **CAD - Cholesterol Management - LDL-C Test** | *Same population as CAD Beta Blocker* | | | *Same population as CAD Beta Blocker* | | |
| Age | 55.207 | 55.940 | -0.085 | 55.244 | 55.524 | -0.001 |
| Sex (0 = male; 1 = female) | 0.499 | 0.501 | -0.005 | 0.501 | 0.501 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.232 | 0.622 | -0.923 | 0.238 | 0.238 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.814 | 0.824 | -0.025 | 0.817 | 0.817 | 0.000 |

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | 2021 All Data (pre-balancing) | | | 2021 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN General Mean | Comparison Mean | Standardized Difference | HAN General Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **COPD - Use of Spirometry Testing** | | | | | | |
| Age | 54.876 | 53.918 | 0.135 | 54.822 | 54.713 | 0.015 |
| Sex (0 = male; 1 = female) | 0.614 | 0.629 | -0.030 | 0.614 | 0.614 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.280 | 0.671 | -0.871 | 0.280 | 0.280 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.401 | 0.527 | -0.257 | 0.397 | 0.397 | 0.000 |
| | | | | | | |
| **COPD - Pharmacotherapy Management of Exacerbation - 14 days** | | | | | | |
| Age | 55.812 | 56.097 | -0.041 | 55.975 | 55.952 | 0.003 |
| Sex (0 = male; 1 = female) | 0.633 | 0.659 | -0.056 | 0.690 | 0.690 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.269 | 0.633 | -0.820 | 0.285 | 0.285 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.798 | 0.821 | -0.058 | 0.815 | 0.815 | 0.000 |
| | | | | | | |
| **COPD - Pharmacotherapy Management of Exacerbation - 30 days** | *Same population as 14 days* | | | *Same population as 14 days* | | |
| Age | 55.812 | 56.097 | -0.041 | 55.975 | 55.952 | 0.003 |
| Sex (0 = male; 1 = female) | 0.633 | 0.659 | -0.056 | 0.690 | 0.690 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.269 | 0.633 | -0.820 | 0.285 | 0.285 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.798 | 0.821 | -0.058 | 0.815 | 0.815 | 0.000 |
| | | | | | | |
| **Diabetes - Members who had LDL-C Test** | | | | | | |
| Age | 46.478 | 46.105 | 0.030 | 46.462 | 46.443 | 0.002 |
| Sex (0 = male; 1 = female) | 0.657 | 0.677 | -0.041 | 0.657 | 0.657 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.260 | 0.618 | -0.815 | 0.260 | 0.260 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.601 | 0.586 | 0.030 | 0.602 | 0.602 | 0.000 |
| | | | | | | |
| **Diabetes - Retinal Eye Exam** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 46.478 | 46.105 | 0.030 | 46.462 | 46.443 | 0.002 |
| Sex (0 = male; 1 = female) | 0.657 | 0.677 | -0.041 | 0.657 | 0.657 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.260 | 0.618 | -0.815 | 0.260 | 0.260 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.601 | 0.586 | 0.030 | 0.602 | 0.602 | 0.000 |

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | 2021 All Data (pre-balancing) | | | 2021 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| **HEDIS and Utilization/Expenditure Measures** | **HAN General Mean** | **Comparison Mean** | **Standardized Difference** | **HAN General Mean** | **Comparison Mean** | **Standardized Difference** |
| *HEDIS Measures* | | | | | | |
| **Diabetes - HbA1c Testing** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 46.478 | 46.105 | 0.030 | 46.462 | 46.443 | 0.002 |
| Sex (0 = male; 1 = female) | 0.657 | 0.677 | -0.041 | 0.657 | 0.657 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.260 | 0.618 | -0.815 | 0.260 | 0.260 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.601 | 0.586 | 0.030 | 0.602 | 0.602 | 0.000 |
| **Diabetes - Medical Attention for Nephropathy** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 46.478 | 46.105 | 0.030 | 46.462 | 46.443 | 0.002 |
| Sex (0 = male; 1 = female) | 0.657 | 0.677 | -0.041 | 0.657 | 0.657 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.260 | 0.618 | -0.815 | 0.260 | 0.260 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.601 | 0.586 | 0.030 | 0.602 | 0.602 | 0.000 |
| **Hypertension - LDL-C Test** | | | | | | |
| Age | 48.794 | 48.613 | 0.016 | 48.787 | 48.740 | 0.004 |
| Sex (0 = male; 1 = female) | 0.639 | 0.617 | 0.046 | 0.639 | 0.639 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.246 | 0.610 | -0.847 | 0.246 | 0.246 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.620 | 0.584 | 0.075 | 0.620 | 0.620 | 0.000 |
| **Hypertension - ACE/ARB Therapy** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 48.794 | 48.613 | 0.016 | 48.787 | 48.740 | 0.004 |
| Sex (0 = male; 1 = female) | 0.639 | 0.617 | 0.046 | 0.639 | 0.639 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.246 | 0.610 | -0.847 | 0.246 | 0.246 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.620 | 0.584 | 0.075 | 0.620 | 0.620 | 0.000 |
| **Mental Health - Follow-up after Hospitalization - 7 days - 6 to 20** | | | | | | |
| Age | 15.045 | 15.235 | -0.064 | 15.165 | 15.148 | 0.006 |
| Sex (0 = male; 1 = female) | 0.655 | 0.612 | 0.091 | 0.655 | 0.655 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.250 | 0.565 | -0.728 | 0.251 | 0.251 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.111 | 0.069 | 0.134 | 0.093 | 0.093 | 0.000 |

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | 2021 All Data (pre-balancing) | | | 2021 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| **HEDIS and Utilization/Expenditure Measures** | HAN General Mean | Comparison Mean | Standardized Difference | HAN General Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **Mental Health - Follow-up after Hospitalization - 7 days - 21 and older** | | | | | | |
| Age | 38.102 | 38.785 | -0.057 | 37.364 | 37.461 | -0.008 |
| Sex (0 = male; 1 = female) | 0.656 | 0.667 | -0.024 | 0.672 | 0.672 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.175 | 0.515 | -0.895 | 0.178 | 0.178 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.432 | 0.590 | -0.318 | 0.455 | 0.455 | 0.000 |
| **Mental Health - Follow-up after Hospitalization - 30 days - 6 to 20** | *Same population as 7 days - 6 to 20* | | | *Same population as 7 days - 6 to 20* | | |
| Age | 15.045 | 15.235 | -0.064 | 15.165 | 15.148 | 0.006 |
| Sex (0 = male; 1 = female) | 0.655 | 0.612 | 0.091 | 0.655 | 0.655 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.250 | 0.565 | -0.728 | 0.251 | 0.251 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.111 | 0.069 | 0.134 | 0.093 | 0.093 | 0.000 |
| **Mental Health - Follow-up after Hospitalization - 30 days - 21 and older** | *Same population as 7 days - 21 and older* | | | *Same population as 7 days - 21 and older* | | |
| Age | 38.102 | 38.785 | -0.057 | 37.364 | 37.461 | -0.008 |
| Sex (0 = male; 1 = female) | 0.656 | 0.667 | -0.024 | 0.672 | 0.672 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.175 | 0.515 | -0.895 | 0.178 | 0.178 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.432 | 0.590 | -0.318 | 0.455 | 0.455 | 0.000 |
| **Child and Adolescents' Access to PCP - 12 months to 19 years** | | | | | | |
| Age | 9.623 | 9.832 | -0.039 | 9.623 | 9.623 | 0.000 |
| Sex (0 = male; 1 = female) | 0.488 | 0.492 | -0.008 | 0.488 | 0.488 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.235 | 0.587 | -0.831 | 0.235 | 0.235 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.035 | 0.029 | 0.033 | 0.035 | 0.035 | 0.000 |
| **Adults' Access to Preventive/Ambulatory Health Services** | | | | | | |
| Age | 36.201 | 37.063 | -0.071 | 36.196 | 36.198 | 0.000 |
| Sex (0 = male; 1 = female) | 0.697 | 0.729 | -0.069 | 0.697 | 0.697 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.246 | 0.594 | -0.807 | 0.246 | 0.246 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.351 | 0.320 | 0.066 | 0.351 | 0.351 | 0.000 |

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | 2021 All Data (pre-balancing) | | | 2021 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN General Mean | Comparison Mean | Standardized Difference | HAN General Mean | Comparison Mean | Standardized Difference |
| *Utilization/Expenditure Measures* | | | | | | |
| **Emergency Room Visits (per 1,000 member months) - All** | | | | | | |
| Age | 12.830 | 13.992 | -0.108 | 12.817 | 12.827 | -0.001 |
| Sex | 0.513 | 0.524 | -0.023 | 0.513 | 0.513 | 0.000 |
| Urban/Rural | 0.225 | 0.588 | -0.869 | 0.225 | 0.225 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.078 | 0.078 | -0.001 | 0.077 | 0.077 | 0.000 |
| **Hospital Admissions (per 100,000 member months) - All** | *Same population as ER visits* | | | *Same population as ER visits* | | |
| Age | 12.830 | 13.992 | -0.108 | 12.817 | 12.827 | -0.001 |
| Sex | 0.513 | 0.524 | -0.023 | 0.513 | 0.513 | 0.000 |
| Urban/Rural | 0.225 | 0.588 | -0.869 | 0.225 | 0.225 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.078 | 0.078 | -0.001 | 0.077 | 0.077 | 0.000 |
| **Per Member Per Month Expenditures - All** | *Same population as ER visits* | | | *Same population as ER visits* | | |
| Age | 12.830 | 13.992 | -0.108 | 12.817 | 12.827 | -0.001 |
| Sex | 0.513 | 0.524 | -0.023 | 0.513 | 0.513 | 0.000 |
| Urban/Rural | 0.225 | 0.588 | -0.869 | 0.225 | 0.225 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.078 | 0.078 | -0.001 | 0.077 | 0.077 | 0.000 |

| HEALTH ACCESS NETWORKS - CM - STATEWIDE | 2019 All Data (pre-balancing) | | | 2019 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN CM Mean | Comparison Mean | Standardized Difference | HAN CM Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| | | | | | | |
| **Asthma - Medication Ratio - 5 to 18 years** | | | | | | |
| Age | 10.401 | 11.073 | -0.171 | 10.401 | 10.401 | 0.000 |
| Gender (0 = male; 1 = female) | 0.481 | 0.493 | -0.024 | 0.481 | 0.481 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.202 | 0.581 | -0.945 | 0.202 | 0.202 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.227 | 0.038 | 0.452 | 0.227 | 0.227 | 0.000 |
| | | | | | | |
| **Asthma - Medication Ratio - 19 to 64 years** | | | | | | |
| Age | 45.766 | 38.670 | 0.550 | 45.766 | 45.692 | 0.006 |
| Sex (0 = male; 1 = female) | 0.676 | 0.689 | -0.027 | 0.676 | 0.676 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.192 | 0.600 | -1.038 | 0.192 | 0.192 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.787 | 0.428 | 0.879 | 0.787 | 0.787 | 0.000 |
| | | | | | | |
| **CAD - Persistent Beta-Blocker Treatment after a Heart Attack** | | | | | | |
| Age | 54.294 | 54.758 | -0.054 | 54.294 | 54.078 | 0.025 |
| Sex (0 = male; 1 = female) | 0.549 | 0.526 | 0.047 | 0.549 | 0.549 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.177 | 0.620 | -1.163 | 0.177 | 0.177 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.902 | 0.831 | 0.240 | 0.902 | 0.902 | 0.000 |
| | | | | | | |
| **CAD - Cholesterol Management - LDL-C Test** | *Same population as CAD Beta Blocker* | | | *Same population as CAD Beta Blocker* | | |
| Age | 54.294 | 54.758 | -0.054 | 54.294 | 54.078 | 0.025 |
| Sex (0 = male; 1 = female) | 0.549 | 0.526 | 0.047 | 0.549 | 0.549 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.177 | 0.620 | -1.163 | 0.177 | 0.177 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.902 | 0.831 | 0.240 | 0.902 | 0.902 | 0.000 |

| HEALTH ACCESS NETWORKS - CM - STATEWIDE | 2019 All Data (pre-balancing) | | | 2019 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN CM Mean | Comparison Mean | Standardized Difference | HAN CM Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **COPD - Use of Spirometry Testing** | | | | | | |
| Age | 50.208 | 46.804 | 0.204 | 50.208 | 50.279 | -0.004 |
| Sex (0 = male; 1 = female) | 0.625 | 0.626 | -0.002 | 0.625 | 0.625 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.333 | 0.648 | -0.667 | 0.333 | 0.333 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.917 | 0.656 | 0.944 | 0.917 | 0.917 | 0.000 |
| | | | | | | |
| **COPD - Pharmacotherapy Management of Exacerbation - 14 days** | | | | | | |
| Age | 55.966 | 52.715 | 0.508 | 55.966 | 55.775 | 0.030 |
| Sex (0 = male; 1 = female) | 0.621 | 0.684 | -0.130 | 0.621 | 0.621 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.345 | 0.630 | -0.599 | 0.345 | 0.345 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.966 | 0.837 | 0.706 | 0.966 | 0.966 | 0.000 |
| | | | | | | |
| **COPD - Pharmacotherapy Management of Exacerbation - 30 days** | *Same population as 14 days* | | | *Same population as 14 days* | | |
| Age | 55.966 | 52.715 | 0.508 | 55.966 | 55.775 | 0.030 |
| Sex (0 = male; 1 = female) | 0.621 | 0.684 | -0.130 | 0.621 | 0.621 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.345 | 0.630 | -0.599 | 0.345 | 0.345 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.966 | 0.837 | 0.706 | 0.966 | 0.966 | 0.000 |
| | | | | | | |
| **Diabetes - Members who had LDL-C Test** | | | | | | |
| Age | 50.420 | 47.676 | 0.268 | 50.420 | 50.507 | 1.006 |
| Sex (0 = male; 1 = female) | 0.618 | 0.652 | -0.069 | 0.618 | 0.618 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.153 | 0.617 | -1.292 | 0.153 | 0.153 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.878 | 0.688 | 0.579 | 0.878 | 0.878 | 0.000 |
| | | | | | | |
| **Diabetes - Retinal Eye Exam** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 50.420 | 47.676 | 0.268 | 50.420 | 50.507 | 1.006 |
| Sex (0 = male; 1 = female) | 0.618 | 0.652 | -0.069 | 0.618 | 0.618 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.153 | 0.617 | -1.292 | 0.153 | 0.153 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.878 | 0.688 | 0.579 | 0.878 | 0.878 | 0.000 |

| HEALTH ACCESS NETWORKS - CM - STATEWIDE | 2019 All Data (pre-balancing) | | | 2019 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN CM Mean | Comparison Mean | Standardized Difference | HAN CM Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| | | | | | | |
| **Child and Adolescents' Access to PCP - 12 months to 19 years** | | | | | | |
| Age | 7.453 | 9.025 | -0.306 | 7.453 | 0.000 | 0.000 |
| Sex (0 = male; 1 = female) | 0.481 | 0.492 | -0.022 | 0.481 | 0.000 | 4.158 |
| Urban/Rural (0 = urban; 1 = rural) | 0.209 | 0.576 | -0.904 | 0.209 | 0.000 | 9.592 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.193 | 0.033 | 0.407 | 0.193 | 0.000 | 10.357 |
| | | | | | | |
| **Adults' Access to Preventive/Ambulatory Health Services** | | | | | | |
| Age | 46.481 | 39.761 | 0.542 | 46.481 | 46.474 | 0.001 |
| Sex (0 = male; 1 = female) | 0.678 | 0.694 | -0.034 | 0.678 | 0.678 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.191 | 0.598 | -1.037 | 0.191 | 0.191 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.796 | 0.441 | 0.881 | 0.796 | 0.796 | 0.000 |

| HEALTH ACCESS NETWORKS - CM - STATEWIDE | 2019 All Data (pre-balancing) | | | 2019 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN CM Mean | Comparison Mean | Standardized Difference | HAN CM Mean | Comparison Mean | Standardized Difference |
| *Utilization/Expenditure Measures* | | | | | | |
| **Emergency Room Visits (per 1,000 member months) - All** | | | | | | |
| Age | 18.842 | 13.419 | 0.286 | 18.872 | 18.872 | -0.002 |
| Sex | 0.528 | 0.518 | 0.021 | 0.528 | 0.528 | 0.000 |
| Urban/Rural | 0.195 | 0.564 | -0.931 | 0.195 | 0.195 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.396 | 0.098 | 0.610 | 0.396 | 0.396 | 0.000 |
| Prior Year PMPM top 5% | 0.254 | 0.047 | 0.462 | 0.245 | 0.245 | 0.000 |
| **Hospital Admissions (per 100,000 member months) - All** | *Same population as ER visits* | | | *Same population as ER visits* | | |
| Age | 18.842 | 13.419 | 0.286 | 18.872 | 18.872 | -0.002 |
| Sex | 0.528 | 0.518 | 0.021 | 0.528 | 0.528 | 0.000 |
| Urban/Rural | 0.195 | 0.564 | -0.931 | 0.195 | 0.195 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.396 | 0.098 | 0.610 | 0.396 | 0.396 | 0.000 |
| Prior Year PMPM top 5% | 0.254 | 0.047 | 0.462 | 0.245 | 0.245 | 0.000 |
| **Per Member Per Month Expenditures - All** | *Same population as ER visits* | | | *Same population as ER visits* | | |
| Age | 18.842 | 13.419 | 0.286 | 18.872 | 18.872 | -0.002 |
| Sex | 0.528 | 0.518 | 0.021 | 0.528 | 0.528 | 0.000 |
| Urban/Rural | 0.195 | 0.564 | -0.931 | 0.195 | 0.195 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.396 | 0.098 | 0.610 | 0.396 | 0.396 | 0.000 |
| Prior Year PMPM top 5% | 0.254 | 0.047 | 0.462 | 0.245 | 0.245 | 0.000 |

| HEALTH ACCESS NETWORKS - CM - STATEWIDE | 2020 All Data (pre-balancing) | | | 2020 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN CM Mean | Comparison Mean | Standardized Difference | HAN CM Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| | | | | | | |
| **Asthma - Medication Ratio - 5 to 18 years** | | | | | | |
| Age | 10.409 | 11.389 | -0.194 | 10.409 | 10.409 | 0.000 |
| Gender (0 = male; 1 = female) | 0.469 | 0.492 | -0.045 | 0.469 | 0.469 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.192 | 0.576 | 0.976 | 0.192 | 0.192 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.196 | 0.034 | 0.409 | 0.196 | 0.196 | 0.000 |
| | | | | | | |
| **Asthma - Medication Ratio - 19 to 64 years** | | | | | | |
| Age | 42.914 | 35.222 | 0.556 | 42.914 | 42.883 | 0.002 |
| Sex (0 = male; 1 = female) | 0.723 | 0.699 | 0.052 | 0.723 | 0.723 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.147 | 0.580 | -1.222 | 0.147 | 0.147 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.679 | 0.285 | 0.844 | 0.679 | 0.679 | 0.000 |
| | | | | | | |
| **CAD - Persistent Beta-Blocker Treatment after a Heart Attack** | | | | | | |
| Age | 54.361 | 55.551 | -0.137 | 54.361 | 54.361 | 0.000 |
| Sex (0 = male; 1 = female) | 0.528 | 0.509 | 0.038 | 0.528 | 0.528 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.167 | 0.623 | -1.223 | 0.167 | 0.167 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.889 | 0.824 | 0.207 | 0.889 | 0.889 | 0.000 |
| | | | | | | |
| **CAD - Cholesterol Management - LDL-C Test** | *Same population as CAD Beta Blocker* | | | *Same population as CAD Beta Blocker* | | |
| Age | 54.361 | 55.551 | -0.137 | 54.361 | 54.361 | 0.000 |
| Sex (0 = male; 1 = female) | 0.528 | 0.509 | 0.038 | 0.528 | 0.528 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.167 | 0.623 | -1.223 | 0.167 | 0.167 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.889 | 0.824 | 0.207 | 0.889 | 0.889 | 0.000 |

| HEALTH ACCESS NETWORKS - CM - STATEWIDE | 2020 All Data (pre-balancing) | | | 2020 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN CM Mean | Comparison Mean | Standardized Difference | HAN CM Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **COPD - Use of Spirometry Testing** | | | | | | |
| Age | 29.756 | 37.031 | -0.301 | 30.200 | 30.262 | -0.003 |
| Sex (0 = male; 1 = female) | 0.512 | 0.553 | -0.082 | 0.500 | 0.500 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.220 | 0.611 | -0.946 | 0.225 | 0.225 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.634 | 0.527 | 0.223 | 0.625 | 0.625 | 0.000 |
| | | | | | | |
| **COPD - Pharmacotherapy Management of Exacerbation - 14 days** | | | | | | |
| Age | 51.529 | 53.066 | -0.170 | 52.813 | 53.035 | -0.025 |
| Sex (0 = male; 1 = female) | 0.706 | 0.645 | 0.134 | 0.750 | 0.750 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.235 | 0.585 | -0.824 | 0.188 | 0.188 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.941 | 0.821 | 0.512 | 0.938 | 0.938 | 0.000 |
| | | | | | | |
| **COPD - Pharmacotherapy Management of Exacerbation - 30 days** | *Same population as 14 days* | | | *Same population as 14 days* | | |
| Age | 51.529 | 53.066 | -0.170 | 52.813 | 53.035 | -0.025 |
| Sex (0 = male; 1 = female) | 0.706 | 0.645 | 0.134 | 0.750 | 0.750 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.235 | 0.585 | -0.824 | 0.188 | 0.188 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.941 | 0.821 | 0.512 | 0.938 | 0.938 | 0.000 |
| | | | | | | |
| **Diabetes - Members who had LDL-C Test** | | | | | | |
| Age | 50.238 | 46.351 | 0.399 | 50.238 | 50.123 | 0.012 |
| Sex (0 = male; 1 = female) | 0.733 | 0.667 | 0.151 | 0.733 | 0.733 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.124 | 0.597 | -1.438 | 0.124 | 0.124 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.857 | 0.586 | 0.775 | 0.857 | 0.857 | 0.000 |
| | | | | | | |
| **Diabetes - Retinal Eye Exam** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 50.238 | 46.351 | 0.399 | 50.238 | 50.123 | 0.012 |
| Sex (0 = male; 1 = female) | 0.733 | 0.667 | 0.151 | 0.733 | 0.733 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.124 | 0.597 | -1.438 | 0.124 | 0.124 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.857 | 0.586 | 0.775 | 0.857 | 0.857 | 0.000 |

| HEALTH ACCESS NETWORKS - CM - STATEWIDE | 2020 All Data (pre-balancing) | | | 2020 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN CM Mean | Comparison Mean | Standardized Difference | HAN CM Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **Diabetes - HbA1c Testing** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 50.238 | 46.351 | 0.399 | 50.238 | 50.123 | 0.012 |
| Sex (0 = male; 1 = female) | 0.733 | 0.667 | 0.151 | 0.733 | 0.733 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.124 | 0.597 | -1.438 | 0.124 | 0.124 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.857 | 0.586 | 0.775 | 0.857 | 0.857 | 0.000 |
| **Diabetes - Medical Attention for Nephropathy** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 50.238 | 46.351 | 0.399 | 50.238 | 50.123 | 0.012 |
| Sex (0 = male; 1 = female) | 0.733 | 0.667 | 0.151 | 0.733 | 0.733 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.124 | 0.597 | -1.438 | 0.124 | 0.124 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.857 | 0.586 | 0.775 | 0.857 | 0.857 | 0.000 |
| **Hypertension - LDL-C Test** | | | | | | |
| Age | 50.966 | 47.621 | 0.335 | 50.966 | 51.012 | -0.005 |
| Sex (0 = male; 1 = female) | 0.705 | 0.624 | 0.179 | 0.705 | 0.705 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.082 | 0.588 | -1.841 | 0.082 | 0.082 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.836 | 0.584 | 0.680 | 0.836 | 0.836 | 0.000 |
| **Hypertension - ACE/ARB Therapy** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 50.966 | 47.621 | 0.335 | 50.966 | 51.012 | -0.005 |
| Sex (0 = male; 1 = female) | 0.705 | 0.624 | 0.179 | 0.705 | 0.705 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.082 | 0.588 | -1.841 | 0.082 | 0.082 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.836 | 0.584 | 0.680 | 0.836 | 0.836 | 0.000 |
| **Child and Adolescents' Access to PCP - 12 months to 19 years** | | | | | | |
| Age | 7.335 | 9.254 | -0.367 | 7.335 | 48.164 | 0.000 |
| Sex (0 = male; 1 = female) | 0.469 | 0.493 | -0.048 | 0.469 | 0.469 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.204 | 0.574 | -0.919 | 0.204 | 0.204 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.154 | 0.029 | 0.347 | 0.154 | 0.154 | 0.000 |
| **Adults' Access to Preventive/Ambulatory Health Services** | | | | | | |
| Age | 44.546 | 37.771 | 0.525 | 44.546 | 44.505 | 0.003 |
| Sex (0 = male; 1 = female) | 0.729 | 0.725 | 0.010 | 0.729 | 0.729 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.139 | 0.578 | -1.266 | 0.139 | 0.139 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.709 | 0.320 | 0.857 | 0.709 | 0.709 | 0.000 |

| HEALTH ACCESS NETWORKS - CM - STATEWIDE | 2020 All Data (pre-balancing) | | | 2020 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN CM Mean | Comparison Mean | Standardized Difference | HAN CM Mean | Comparison Mean | Standardized Difference |
| *Utilization/Expenditure Measures* | | | | | | |
| **Emergency Room Visits (per 1,000 member months) - All** | | | | | | |
| Age | 16.590 | 13.515 | 0.176 | 16.530 | 16.695 | -0.009 |
| Sex | 0.523 | 0.519 | 0.008 | 0.523 | 0.523 | 0.000 |
| Urban/Rural | 0.185 | 0.574 | -1.004 | 0.185 | 0.185 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.317 | 0.087 | 0.494 | 0.316 | 0.316 | 0.000 |
| Prior Year PMPM top 5% | 0.195 | 0.046 | 0.378 | 0.194 | 0.194 | 0.000 |
| **Hospital Admissions (per 100,000 member months) - All** | | | | | | |
| Age | 16.590 | 13.515 | 0.176 | 16.530 | 16.695 | -0.009 |
| Sex | 0.523 | 0.519 | 0.008 | 0.523 | 0.523 | 0.000 |
| Urban/Rural | 0.185 | 0.574 | -1.004 | 0.185 | 0.185 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.317 | 0.087 | 0.494 | 0.316 | 0.316 | 0.000 |
| Prior Year PMPM top 5% | 0.195 | 0.046 | 0.378 | 0.194 | 0.194 | 0.000 |
| **Per Member Per Month Expenditures - All** | | | | | | |
| Age | 16.590 | 13.515 | 0.176 | 16.530 | 16.695 | -0.009 |
| Sex | 0.523 | 0.519 | 0.008 | 0.523 | 0.523 | 0.000 |
| Urban/Rural | 0.185 | 0.574 | -1.004 | 0.185 | 0.185 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.317 | 0.087 | 0.494 | 0.316 | 0.316 | 0.000 |
| Prior Year PMPM top 5% | 0.195 | 0.046 | 0.378 | 0.194 | 0.194 | 0.000 |

| HEALTH ACCESS NETWORKS - CM - STATEWIDE | 2021 All Data (pre-balancing) | | | 2021 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN CM Mean | Comparison Mean | Standardized Difference | HAN CM Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **Asthma - Medication Ratio - 5 to 18 years** | | | | | | |
| Age | 10.550 | 11.257 | -0.178 | 10.550 | 10.550 | 0.000 |
| Gender (0 = male; 1 = female) | 0.462 | 0.491 | -0.057 | 0.462 | 0.462 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.224 | 0.589 | -0.876 | 0.224 | 0.224 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.201 | 0.029 | 0.428 | 0.201 | 0.201 | 0.000 |
| | | | | | | |
| **Asthma - Medication Ratio - 19 to 64 years** | | | | | | |
| Age | 40.711 | 33.357 | 0.493 | 40.702 | 40.678 | 0.002 |
| Sex (0 = male; 1 = female) | 0.708 | 0.688 | 0.045 | 0.708 | 0.708 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.166 | 0.594 | -1.152 | 0.166 | 0.166 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.592 | 0.233 | 0.730 | 0.592 | 0.592 | 0.000 |
| | | | | | | |
| **CAD - Persistent Beta-Blocker Treatment after a Heart Attack** | | | | | | |
| Age | 56.020 | 55.940 | 0.010 | 55.816 | 55.569 | 0.031 |
| Sex (0 = male; 1 = female) | 0.460 | 0.501 | -0.083 | 0.469 | 0.469 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.120 | 0.622 | -1.545 | 0.122 | 0.122 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.889 | 0.824 | 0.207 | 0.889 | 0.889 | 0.000 |
| | | | | | | |
| **CAD - Cholesterol Management - LDL-C Test** | *Same population as CAD Beta Blocker* | | | *Same population as CAD Beta Blocker* | | |
| Age | 56.020 | 55.940 | 0.010 | 55.816 | 55.569 | 0.031 |
| Sex (0 = male; 1 = female) | 0.460 | 0.501 | -0.083 | 0.469 | 0.469 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.120 | 0.622 | -1.545 | 0.122 | 0.122 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.889 | 0.824 | 0.207 | 0.889 | 0.889 | 0.000 |

| HEALTH ACCESS NETWORKS - CM - STATEWIDE | 2021 All Data (pre-balancing) | | | 2021 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN CM Mean | Comparison Mean | Standardized Difference | HAN CM Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **COPD - Use of Spirometry Testing** | | | | | | |
| Age | 55.861 | 53.918 | 0.285 | 55.861 | 55.870 | -0.001 |
| Sex (0 = male; 1 = female) | 0.558 | 0.629 | -0.142 | 0.558 | 0.558 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.140 | 0.671 | -1.534 | 0.140 | 0.140 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.634 | 0.527 | 0.223 | 0.625 | 0.625 | 0.000 |
| | | | | | | |
| **COPD - Pharmacotherapy Management of Exacerbation - 14 days** | | | | | | |
| Age | 54.682 | 56.097 | -0.196 | 55.412 | 55.069 | 0.048 |
| Sex (0 = male; 1 = female) | 0.455 | 0.659 | -0.411 | 0.588 | 0.588 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.136 | 0.633 | -0.145 | 0.118 | 0.118 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.941 | 0.821 | 0.512 | 0.938 | 0.938 | 0.000 |
| | | | | | | |
| **COPD - Pharmacotherapy Management of Exacerbation - 30 days** | *Same population as 14 days* | | | *Same population as 14 days* | | |
| Age | 54.682 | 56.097 | -0.196 | 55.412 | 55.069 | 0.048 |
| Sex (0 = male; 1 = female) | 0.455 | 0.659 | -0.411 | 0.588 | 0.588 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.136 | 0.633 | -0.145 | 0.118 | 0.118 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.941 | 0.821 | 0.512 | 0.938 | 0.938 | 0.000 |
| | | | | | | |
| **Diabetes - Members who had LDL-C Test** | | | | | | |
| Age | 49.659 | 46.105 | 0.297 | 49.659 | 49.553 | 0.009 |
| Sex (0 = male; 1 = female) | 0.659 | 0.677 | -0.038 | 0.659 | 0.659 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.135 | 0.618 | -1.410 | 0.135 | 0.135 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.857 | 0.586 | 0.775 | 0.857 | 0.857 | 0.000 |
| | | | | | | |
| **Diabetes - Retinal Eye Exam** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 49.659 | 46.105 | 0.297 | 49.659 | 49.553 | 0.009 |
| Sex (0 = male; 1 = female) | 0.659 | 0.677 | -0.038 | 0.659 | 0.659 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.135 | 0.618 | -1.410 | 0.135 | 0.135 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.857 | 0.586 | 0.775 | 0.857 | 0.857 | 0.000 |

| HEALTH ACCESS NETWORKS - CM - STATEWIDE | 2021 All Data (pre-balancing) | | | 2021 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| **HEDIS and Utilization/Expenditure Measures** | **HAN CM Mean** | **Comparison Mean** | **Standardized Difference** | **HAN CM Mean** | **Comparison Mean** | **Standardized Difference** |
| *HEDIS Measures* | | | | | | |
| | | | | | | |
| **Diabetes - HbA1c Testing** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 49.659 | 46.105 | 0.297 | 49.659 | 49.553 | 0.009 |
| Sex (0 = male; 1 = female) | 0.659 | 0.677 | -0.038 | 0.659 | 0.659 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.135 | 0.618 | -1.410 | 0.135 | 0.135 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.857 | 0.586 | 0.775 | 0.857 | 0.857 | 0.000 |
| | | | | | | |
| **Diabetes - Medical Attention for Nephropathy** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 49.659 | 46.105 | 0.297 | 49.659 | 49.553 | 0.009 |
| Sex (0 = male; 1 = female) | 0.659 | 0.677 | -0.038 | 0.659 | 0.659 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.135 | 0.618 | -1.410 | 0.135 | 0.135 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.857 | 0.586 | 0.775 | 0.857 | 0.857 | 0.000 |
| | | | | | | |
| **Hypertension - LDL-C Test** | | | | | | |
| Age | 51.842 | 48.613 | 0.290 | 51.842 | 51.786 | 0.005 |
| Sex (0 = male; 1 = female) | 0.638 | 0.617 | 0.044 | 0.638 | 0.638 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.133 | 0.610 | -1.408 | 0.133 | 0.133 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.836 | 0.584 | 0.680 | 0.836 | 0.836 | 0.000 |
| | | | | | | |
| **Hypertension - ACE/ARB Therapy** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 51.842 | 48.613 | 0.290 | 51.842 | 51.786 | 0.005 |
| Sex (0 = male; 1 = female) | 0.638 | 0.617 | 0.044 | 0.638 | 0.638 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.133 | 0.610 | -1.408 | 0.133 | 0.133 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.836 | 0.584 | 0.680 | 0.836 | 0.836 | 0.000 |
| | | | | | | |
| **Child and Adolescents' Access to PCP - 12 months to 19 years** | | | | | | |
| Age | 7.910 | 9.832 | -0.356 | 7.910 | 7.904 | 0.001 |
| Sex (0 = male; 1 = female) | 0.470 | 0.492 | -0.044 | 0.470 | 0.000 | 4.256 |
| Urban/Rural (0 = urban; 1 = rural) | 0.226 | 0.587 | -0.863 | 0.226 | 0.000 | 8.838 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.154 | 0.029 | 0.347 | 0.154 | 0.154 | 0.000 |
| | | | | | | |
| **Adults' Access to Preventive/Ambulatory Health Services** | | | | | | |
| Age | 44.043 | 37.063 | 0.496 | 44.043 | 43.994 | 0.004 |
| Sex (0 = male; 1 = female) | 0.702 | 0.729 | -0.057 | 0.702 | 0.702 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.156 | 0.594 | -1.206 | 0.156 | 0.156 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.709 | 0.320 | 0.857 | 0.709 | 0.709 | 0.000 |

| HEALTH ACCESS NETWORKS - CM - STATEWIDE | 2021 All Data (pre-balancing) | | | 2021 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HAN CM Mean | Comparison Mean | Standardized Difference | HAN CM Mean | Comparison Mean | Standardized Difference |
| *Utilization/Expenditure Measures* | | | | | | |
| **Emergency Room Visits (per 1,000 member months) - All** | | | | | | |
| Age | 16.213 | 13.992 | 0.133 | 16.213 | 16.288 | -0.005 |
| Sex | 0.516 | 0.524 | -0.017 | 0.516 | 0.516 | 0.000 |
| Urban/Rural | 0.200 | 0.588 | -0.970 | 0.200 | 0.200 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.304 | 0.078 | 0.491 | 0.304 | 0.304 | 0.000 |
| Prior Year PMPM top 5% | 0.171 | 0.045 | 0.335 | 0.171 | 0.171 | 0.000 |
| **Hospital Admissions (per 100,000 member months) - All** | | | | | | |
| Age | 16.213 | 13.992 | 0.133 | 16.213 | 16.288 | -0.005 |
| Sex | 0.516 | 0.524 | -0.017 | 0.516 | 0.516 | 0.000 |
| Urban/Rural | 0.200 | 0.588 | -0.970 | 0.200 | 0.200 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.304 | 0.078 | 0.491 | 0.304 | 0.304 | 0.000 |
| Prior Year PMPM top 5% | 0.171 | 0.045 | 0.335 | 0.171 | 0.171 | 0.000 |
| **Per Member Per Month Expenditures - All** | | | | | | |
| Age | 16.213 | 13.992 | 0.133 | 16.213 | 16.288 | -0.005 |
| Sex | 0.516 | 0.524 | -0.017 | 0.516 | 0.516 | 0.000 |
| Urban/Rural | 0.200 | 0.588 | -0.970 | 0.200 | 0.200 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.304 | 0.078 | 0.491 | 0.304 | 0.304 | 0.000 |
| Prior Year PMPM top 5% | 0.171 | 0.045 | 0.335 | 0.171 | 0.171 | 0.000 |

## 3. HAN Statistical Significance Test Results - 2019 – 2021 and 3-Year Pooled

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | Percent Compliant | | | | P-Value/Statistical Significance (p < .05) | | | |
|---|---|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | 2019 | 2020 | 2021 | Pooled | 2019 | 2020 | 2021 | Pooled |
| *HEDIS Measures* | | | | | | | | |
| **Asthma - Medication Ratio - 5 to 18 years** | | | | | | | | |
| HAN | 77.9% | 81.3% | 90.8% | 83.3% | 0.0046 | 0.0000 | 0.0002 | 0.0000 |
| Comparison Group | 80.0% | 85.3% | 92.4% | 85.9% | **Yes** | **Yes** | **Yes** | **Yes** |
| **Asthma - Medication Ratio - 19 to 64 years** | | | | | | | | |
| HAN | 66.9% | 72.2% | 84.9% | 74.7% | 0.0002 | 0.3125 | 0.0043 | 0.0001 |
| Comparison Group | 74.1% | 71.4% | 87.2% | 77.6% | **Yes** | No | **Yes** | **Yes** |
| **CAD - Persistent Beta-Blocker Treatment after a Heart Attack** | | | | | | | | |
| HAN | 41.7% | 38.8% | 39.9% | 40.1% | 0.5647 | 0.0000 | 0.0000 | 0.0000 |
| Comparison Group | 43.5% | 50.5% | 47.2% | 47.1% | No | **Yes** | **Yes** | **Yes** |
| **CAD - Cholesterol Management - LDL-C Test** | | | | | | | | |
| HAN | 62.8% | 51.5% | 53.7% | 56.0% | 0.0951 | 0.0507 | 0.0000 | 0.1010 |
| Comparison Group | 57.9% | 57.7% | 59.0% | 58.2% | No | No | **Yes** | No |
| **COPD - Use of Spirometry Testing** | | | | | | | | |
| HAN | 23.3% | 37.5% | 13.5% | 24.8% | 0.6561 | 0.0137 | 0.2011 | 0.1828 |
| Comparison Group | 22.2% | 33.3% | 15.5% | 23.7% | No | **Yes** | No | No |
| **COPD - Pharmacotherapy Management of Exacerbation - 14 days** | | | | | | | | |
| HAN | 65.8% | 59.6% | 62.9% | 62.8% | 0.8995 | 0.1846 | 0.0773 | 0.0371 |
| Comparison Group | 66.3% | 66.1% | 69.7% | 67.4% | No | No | No | **Yes** |
| **COPD - Pharmacotherapy Management of Exacerbation - 30 days** | | | | | | | | |
| HAN | 73.4% | 69.9% | 69.5% | 70.9% | 0.6047 | 0.5542 | 0.4805 | 1.0000 |
| Comparison Group | 75.4% | 67.1% | 70.3% | 70.9% | No | No | No | No |
| **Diabetes - HbA1c Testing** | | | | | | | | |
| HAN | 76.7% | 72.2% | 65.2% | 71.4% | 0.0000 | 0.0000 | 0.3736 | 0.0000 |
| Comparison Group | 71.9% | 65.8% | 66.0% | 67.9% | **Yes** | **Yes** | No | **Yes** |

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | Percent Compliant | | | | P-Value/Statistical Significance (p < .05) | | | |
|---|---|---|---|---|---|---|---|---|
| **HEDIS and Utilization/Expenditure Measures** | **2019** | **2020** | **2021** | **Pooled** | **2019** | **2020** | **2021** | **Pooled** |
| *HEDIS Measures* | | | | | | | | |
| **Diabetes - HbA1c Testing** | | | | | | | | |
| HAN | 76.7% | 72.2% | 65.2% | 71.4% | 0.0000 | 0.0000 | 0.3736 | 0.0000 |
| Comparison Group | 71.9% | 65.8% | 66.0% | 67.9% | **Yes** | **Yes** | No | **Yes** |
| **Diabetes - LDL-C Test** | | | | | | | | |
| HAN | 60.0% | 54.5% | 49.1% | 54.5% | 0.0000 | 0.0099 | 0.0000 | 0.0017 |
| Comparison Group | 55.1% | 50.5% | 52.0% | 52.5% | **Yes** | **Yes** | **Yes** | **Yes** |
| **Diabetes - Retinal Eye Exam** | | | | | | | | |
| HAN | 35.3% | 29.8% | 22.2% | 29.1% | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Comparison Group | 24.7% | 19.8% | 19.9% | 21.5% | **Yes** | **Yes** | **Yes** | **Yes** |
| **Diabetes - Medical Attention for Nephropathy** | | | | | | | | |
| HAN | 85.2% | 80.8% | 76.7% | 80.9% | 0.0391 | 0.0178 | 0.6270 | 0.0170 |
| Comparison Group | 83.1% | 78.6% | 76.2% | 79.3% | **Yes** | **Yes** | No | **Yes** |
| **Hypertension - LDL-C Test** | | | | | | | | |
| HAN | 57.3% | 48.9% | 52.3% | 52.8% | 0.0343 | 0.2288 | 0.0000 | 0.3645 |
| Comparison Group | 55.1% | 50.1% | 53.8% | 53.0% | **Yes** | No | **Yes** | No |
| **Hypertension - ACE/ARB Therapy** | | | | | | | | |
| HAN | 60.7% | 59.5% | 57.7% | 59.3% | 0.6181 | 0.2629 | 0.0000 | 0.0013 |
| Comparison Group | 61.3% | 60.6% | 61.1% | 61.0% | No | No | **Yes** | **Yes** |
| **Mental Health - Follow-up after Hospitalization - 7 days - 6 to 20** | | | | | | | | |
| HAN | 58.9% | 64.5% | 52.3% | 58.6% | 0.2330 | 0.0057 | 0.1610 | 0.3663 |
| Comparison Group | 62.0% | 56.9% | 55.5% | 58.1% | No | **Yes** | No | No |
| **Mental Health - Follow-up after Hospitalization - 7 days - 21 and older** | | | | | | | | |
| HAN | 56.8% | 42.9% | 45.3% | 48.3% | 0.2451 | 0.9467 | 0.3407 | 0.3784 |
| Comparison Group | 50.7% | 43.4% | 48.3% | 47.5% | No | No | No | No |

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | Percent Compliant | | | | P-Value/Statistical Significance (p < .05) | | | |
|---|---|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | 2019 | 2020 | 2021 | Pooled | 2019 | 2020 | 2021 | Pooled |
| *HEDIS Measures* | | | | | | | | |
| **Mental Health - Follow-up after Hospitalization - 30 days - 6 to 20** | | | | | | | | |
| HAN | 84.2% | 86.6% | 79.8% | 83.5% | 0.0000 | 0.7896 | 0.9170 | 0.1788 |
| Comparison Group | 87.5% | 86.1% | 79.9% | 84.5% | **Yes** | No | No | No |
| **Mental Health - Follow-up after Hospitalization - 30 days - 21 and older** | | | | | | | | |
| HAN | 80.6% | 72.9% | 72.1% | 75.2% | 0.3203 | 0.6956 | 0.4191 | 0.0870 |
| Comparison Group | 76.4% | 70.1% | 69.8% | 72.1% | No | No | No | No |
| **Adults' Access to Preventive/Ambulatory Health Services** | | | | | | | | |
| HAN | 84.6% | 79.5% | 69.3% | 77.8% | 0.7139 | 0.2155 | 0.0000 | 0.0000 |
| Comparison Group | 84.5% | 79.1% | 73.5% | 79.0% | No | No | **Yes** | **Yes** |
| **Child and Adolescents' Access to PCP - 12 months to 19 years** | | | | | | | | |
| HAN | 92.5% | 88.7% | 81.5% | 87.6% | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Comparison Group | 92.4% | 88.5% | 84.3% | 88.4% | **Yes** | **Yes** | **Yes** | **Yes** |

| HEALTH ACCESS NETWORKS - TOTAL - STATEWIDE | Percent Compliant | | | | P-Value/Statistical Significance (p < .05) | | | |
|---|---|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | 2019 | 2020 | 2021 | Pooled | 2019 | 2020 | 2021 | Pooled |
| *Utilization/Expenditure Measures* | | | | | | | | |
| **Emergency Room Visits (per 1,000 member months) - All** | | | | | | | | |
|     HAN | 54.5 | 36.4 | 40.8 | 43.9 | 0.0000 | 0.0000 | 0.0000 | 0.3617 |
|     Comparison Group | 54.8 | 36.2 | 40.5 | 43.8 | **Yes** | **Yes** | **Yes** | No |
| **Hospital Admissions (per 100,000 member months) - All** | | | | | | | | |
|     HAN | 764.4 | 606.6 | 608.8 | 659.9 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
|     Comparison Group | 632.0 | 489.8 | 468.1 | 530.0 | **Yes** | **Yes** | **Yes** | **Yes** |
| **Per Member Per Month Expenditures - All** | | | | | | | | |
|     HAN | $ 213.32 | $ 187.94 | $ 202.83 | $ 201.36 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
|     Comparison Group | $ 201.62 | $ 182.75 | $ 200.60 | $ 194.99 | **Yes** | **Yes** | **Yes** | **Yes** |

| HEALTH ACCESS NETWORKS - CM - STATEWIDE | Percent Compliant | | | | P-Value/Statistical Significance (p < .05) | | | |
|---|---|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | 2019 | 2020 | 2021 | Pooled | 2019 | 2020 | 2021 | Pooled |
| *HEDIS Measures* | | | | | | | | |
| **Asthma - Medication Ratio - 5 to 18 years** | | | | | | | | |
| HAN | 82.0% | 89.1% | 91.5% | 87.5% | 0.4403 | 0.1584 | 0.3849 | 0.2745 |
| Comparison Group | 81.2% | 84.0% | 92.2% | 85.8% | No | No | No | No |
| **Asthma - Medication Ratio - 19 to 64 years** | | | | | | | | |
| HAN | 75.0% | 63.6% | 82.1% | 73.6% | 0.4603 | 0.1230 | 0.1696 | 0.1419 |
| Comparison Group | 74.0% | 73.9% | 87.1% | 78.3% | No | No | No | No |
| **CAD - Persistent Beta-Blocker Treatment after a Heart Attack** | | | | | | | | |
| HAN | 45.1% | 30.6% | 42.9% | 39.5% | 0.7596 | 0.0295 | 0.4346 | 0.0510 |
| Comparison Group | 42.8% | 48.8% | 48.8% | 46.8% | No | **Yes** | No | No |
| **CAD - Cholesterol Management - LDL-C Test** | | | | | | | | |
| HAN | 64.7% | 55.6% | 46.9% | 55.7% | 0.3418 | 0.8602 | 0.1111 | 0.2935 |
| Comparison Group | 57.9% | 57.1% | 59.2% | 58.1% | No | No | No | No |
| **COPD - Use of Spirometry Testing** | | | | | | | | |
| HAN | 33.3% | 27.5% | 11.6% | 24.1% | 0.1649 | 0.8378 | 0.2325 | 0.2265 |
| Comparison Group | 19.0% | 26.0% | 18.1% | 21.0% | No | No | No | No |
| **COPD - Pharmacotherapy Management of Exacerbation - 14 days** | | | | | | | | |
| HAN | 51.7% | 62.5% | 52.6% | 55.6% | 0.2075 | 0.7597 | 0.0101 | 0.0800 |
| Comparison Group | 64.4% | 58.4% | 71.4% | 64.7% | No | No | **Yes** | No |
| **COPD - Pharmacotherapy Management of Exacerbation - 30 days** | | | | | | | | |
| HAN | 79.3% | 75.0% | 73.7% | 76.0% | 0.3242 | 0.1803 | 0.4040 | 0.0804 |
| Comparison Group | 71.2% | 58.6% | 71.8% | 67.2% | No | No | No | No |
| **Diabetes - HbA1c Testing** | | | | | | | | |
| HAN | 78.6% | 76.6% | 71.8% | 75.7% | 0.0408 | 0.0110 | 0.3467 | 0.0010 |
| Comparison Group | 71.0% | 65.8% | 68.4% | 68.4% | **Yes** | **Yes** | No | **Yes** |

| HEALTH ACCESS NETWORKS - CM - STATEWIDE | Percent Compliant | | | | P-Value/Statistical Significance (p < .05) | | | |
|---|---|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | 2019 | 2020 | 2021 | Pooled | 2019 | 2020 | 2021 | Pooled |
| *HEDIS Measures* | | | | | | | | |
| **Diabetes - LDL-C Test** | | | | | | | | |
| HAN | 65.6% | 60.4% | 56.5% | 60.8% | 0.0200 | 0.0234 | 0.9170 | 0.0051 |
| Comparison Group | 55.6% | 50.5% | 56.9% | 54.3% | **Yes** | **Yes** | No | **Yes** |
| **Diabetes - Retinal Eye Exam** | | | | | | | | |
| HAN | 39.7% | 34.4% | 37.1% | 37.1% | 0.0000 | 0.0001 | 0.0000 | 0.0000 |
| Comparison Group | 24.5% | 19.8% | 20.7% | 21.7% | **Yes** | **Yes** | **Yes** | **Yes** |
| **Diabetes - Medical Attention for Nephropathy** | | | | | | | | |
| HAN | 91.6% | 88.6% | 92.9% | 91.0% | 0.0039 | 0.0069 | 0.0000 | 0.0000 |
| Comparison Group | 84.2% | 78.6% | 80.7% | 81.2% | **Yes** | **Yes** | **Yes** | **Yes** |
| **Hypertension - LDL-C Test** | | | | | | | | |
| HAN | 67.5% | 48.3% | 52.7% | 56.2% | 0.0012 | 0.4277 | 0.3436 | 0.1759 |
| Comparison Group | 56.6% | 51.1% | 55.6% | 54.4% | **Yes** | No | No | No |
| **Hypertension - ACE/ARB Therapy** | | | | | | | | |
| HAN | 64.6% | 57.5% | 59.9% | 60.7% | 0.4818 | 0.3841 | 0.4494 | 0.3168 |
| Comparison Group | 62.2% | 60.6% | 62.1% | 61.6% | No | No | No | No |
| **Adults' Access to Preventive/Ambulatory Health Services** | | | | | | | | |
| HAN | 97.9% | 95.4% | 92.5% | 95.3% | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Comparison Group | 87.5% | 83.4% | 79.4% | 83.4% | **Yes** | **Yes** | **Yes** | **Yes** |
| **Child and Adolescents' Access to PCP - 12 months to 19 years** | | | | | | | | |
| HAN | 99.0% | 95.8% | 93.5% | 96.1% | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Comparison Group | 93.2% | 89.4% | 86.4% | 89.7% | **Yes** | **Yes** | **Yes** | **Yes** |

| HEALTH ACCESS NETWORKS - CM - STATEWIDE | Percent Compliant | | | | P-Value/Statistical Significance (p < .05) | | | |
|---|---|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | 2019 | 2020 | 2021 | Pooled | 2019 | 2020 | 2021 | Pooled |
| *Utilization/Expenditure Measures* | | | | | | | | |
| **Emergency Room Visits (per 1,000 member months) - All** | | | | | | | | |
| HAN | 161.8 | 114.3 | 124.4 | 133.5 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Comparison Group | 124.0 | 84.8 | 91.1 | 100.0 | **Yes** | **Yes** | **Yes** | **Yes** |
| **Hospital Admissions (per 100,000 member months) - All** | | | | | | | | |
| HAN | 3431.4 | 2260.1 | 2312.8 | 2668.1 | 0.8365 | 0.8129 | 0.5090 | 0.4014 |
| Comparison Group | 3515.0 | 2182.8 | 2488.2 | 2728.7 | No | No | No | No |
| **Per Member Per Month Expenditures - All** | | | | | | | | |
| HAN | $ 680.44 | $ 620.76 | $ 579.62 | $ 626.94 | 0.6591 | 0.4133 | 0.0000 | 0.0001 |
| Comparison Group | $ 697.17 | $ 653.91 | $ 726.29 | $ 692.46 | No | No | **Yes** | **Yes** |

## 4. HAN CEM Covariate Balance Tables for CAHPS Measures

| HAN AND HMP PROGRAMS - STATEWIDE | All Data (pre-balancing) | | | Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| **CAHPS Measures** | **Treatment Group Mean** | **Comparison Mean** | **Standardized Difference** | **Treatment Group Mean** | **Comparison Mean** | **Standardized Difference** |
| *All Measures* | | | | | | |
| | | | | | | |
| **HAN Adults** | | | | | | |
| Age Range* | 3.242 | 4.372 | -0.753 | 0.727 | 0.727 | 0.000 |
| Gender (0 = male; 1 = female) | 0.727 | 0.674 | 0.119 | 3.242 | 3.242 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | N/A | N/A | N/A | N/A | N/A | N/A |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | N/A | N/A | N/A | N/A | N/A | N/A |
| | | | | | | |
| **HAN Children** | | | | | | |
| Age | 11.696 | 14.127 | -0.192 | 11.693 | 11.960 | -0.021 |
| Sex (0 = male; 1 = female) | 0.438 | 0.439 | -0.091 | 0.438 | 0.438 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | N/A | N/A | N/A | N/A | N/A | N/A |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | N/A | N/A | N/A | N/A | N/A | N/A |
| | | | | | | |

\*   Adult age ranges: 1 - 18-24; 2 - 25-34; 3 - 35-44; 4 - 45-54; 5 - 55-64; 6 - 65-74; 7 - 75 or older

## 5. HAN Statistical Significance Test Results for CAHPS Measures

| CAHPS Measure | Adults | | | | | Children | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | HAN N = 33 | Comparison Group N = 213 | P-Value | | | HAN N = 283 | Comparison Group N = 668 | P-Value |
| **Getting Needed Care (Composite)** | | | | | | | | |
| Always or Usually | 90.0% | 85.1% | *0.2272* | | | 90.2% | 87.8% | *0.1444* |
| | | | | | | | | |
| **Rating of Health Care (8, 9 or 10)** | | | | | | | | |
| 8 - 10 | 72.0% | 72.8% | *0.4611* | | | 86.7% | 85.1% | *0.2605* |
| | | | | | | | | |
| **Rating of Health Plan (8, 9 or 10)** | | | | | | | | |
| 8 - 10 | 80.6% | 71.3% | *0.1332* | | | 87.0% | 81.6% | *0.0210* |
| | | | | | | | | |
| **Rating of Personal Doctor (8, 9 or 10)** | | | | | | | | |
| 8 - 10 | 88.0% | 83.3% | *0.8397* | | | 89.6% | 87.3% | *0.1594* |

## 6.  HAN Member SDOH Targeted Survey Instrument

Hello, my name is _____ and I am calling on behalf of the SoonerCare program.  May I please speak to {RESPONDENT NAME}?

**INTRO1.**  **We are conducting a short survey to find out about where SoonerCare members get their health care and their experiences with doctors and nurses. The purpose of the survey is to learn about how we can make the program better.  The survey is voluntary and if you decide not to participate it will not affect your benefits. Anything you tell us will be kept confidential. The information will not be shared with your doctor or nurse and will not affect any treatment you may be receiving. The survey takes about 10 minutes.**
[ANSWER ANY QUESTIONS AND PROCEED TO QUESTION 1]

**INTRO2.**  **[If need to leave a message] We are conducting a short survey to find out about where SoonerCare members get their health care and about their experiences with their doctors and nurses.  We can be reached toll-free at 1-888-941-9358.**

[IDENTIFY HAN NAME & CASE MANAGER NAME ON MEMBER SURVEY ROSTER BEFORE BEGINNING INTERVIEW. IF MEMBER IS A MINOR (DOB AFTER CURRENT MONTH IN 2004), ASK PARENT/GUARDIAN SCREENING QUESTION BEFORE BEGINNING SURVEY]

**Parent/Guardian Screening Question:** Are you the parent or guardian of [NAME]? [IF YES, PROCEED TO QUESTION 1. IF NO, ASK TO SPEAK TO PARENT/GUARDIAN. IF UNABLE TO REACH, END CALL]

1.  The SoonerCare program is a health insurance program offered by the state.  Are you currently enrolled in SoonerCare?[91]  [IF MINOR → Is [NAME] currently enrolled in SoonerCare?]

    a.  Yes

    b.  No → [ASK IF ENROLLED IN MEDICAID.  IF NO, END CALL]

    c.  Don't Know/Not Sure → [ASK IF ENROLLED IN MEDICAID.  IF NO, END CALL]

2.  Our records show that you chose or were assigned a doctor to be your/your child's regular SoonerCare provider for check-ups, when you need advice about a health problem or get sick or hurt. Is that right? [If respondent says provider is a Nurse Practitioner, record as "Yes"]

    a.  Yes → [GO TO QUESTION 4]
    b.  No → [GO TO QUESTION 3]
    c.  Don't Know/Not Sure → [GO TO QUESTION 3]

3.  Where do you usually go to get health care (health care for your child)?

    a.  Emergency Room

    b.  Urgent Care Clinic

    c.  No usual place

---

[91] All questions include a "don't know/not sure" or similar option which is unprompted by the surveyor; this response is listed on the instrument to allow surveyors to document such a response.  Questions are reworded for parents/guardians completing the survey on behalf of program participants.

    d.   Have never tried to get care

    e.   Don't Know/Not Sure

4. Some SoonerCare members see providers who belong to what is known as a Health Access Network. One of these is [READ HAN NAME]. Have you heard this name?

    a.   Yes

    b.   No→ [GO TO QUESTION 6]

    c.   Don't Know/Not Sure → [GO TO QUESTION 6]

5. Have you seen a provider who is part of [READ HAN NAME]?

    a.   Yes

    b.   No

    c.   Don't Know/Not Sure

6. [READ HAN NAME] has nurses who are available to help patients who are referred by their provider. Have any nurses from [READ HAN NAME] helped you?

    a.   Yes

    b.   No → [GO TO QUESTION 8]

    c.   Don't Know/Not Sure → [GO TO QUESTION 8]

7. Do you remember the name of the nurse who helped you?

    a.   Yes [RECORD NAME. IF MORE THAN ONE NAME PROVIDED, RECORD FIRST] → [GO TO QUESTION 9]

    b.   No

    c.   Don't Know/Not Sure

8. One of the nurses at [READ HAN NAME] is [CASE MANAGER NAME]. Have you talked to [CASE MANAGER NAME]?

    a.   Yes

    b.   No → [READ TERMINATION SCRIPT]

    c.   Don't Know/Not Sure → [READ TERMINATION SCRIPT]

**[TERMINATION SCRIPT – THE REST OF OUR QUESTIONS TODAY ARE ABOUT HELP PEOPLE RECEIVED FROM NURSES.  THANK YOU FOR YOUR TIME.]**

9. What kind of help did you receive from [CASE MANAGER]? [RECORD ALL HELP]

    a.   Child Care

    b.   Child Car Seat

    c.   Clothing

    d.   Dental

    e.   Diapers

  f. Durable Medical Equipment

  g. Education [SPECIFY TOPIC(S)]

  h. Family Planning/Contraception

  i. Food Pantry/other Food Assistance

  j. Health Education – Asthma/COPD

  k. Health Education – Diabetes

  l. Health Education – Heart Disease

  m. Health Education – Hypertension

  n. Health Education – Obesity

  o. Health Education – Other [SPECIFY]

  p. Housing/Rent

  q. Legal Aid

  r. Long Term Care Waiver (ADvantage or Independent Living)

  s. Long Term Care Waiver (DDSD)

  t. Medical/Behavioral Health Appointment(s) [SPECIFY]

  u. Medication Assistance (not covered by SoonerCare)

  v. Nutrition/WIC

  w. Recreation/Camp

  x. School Supplies

  y. SoonerSuccess [SPECIFY HELP]

  z. Tobacco Cessation

  aa. Transportation to Medical Appointment

  bb. Transportation to Other [RECORD]

  cc. Utility – HVAC

  dd. Utility – Gas

  ee. Utility – Electric

  ff. Utility - Water

  gg. Other – Referral [SPECIFY]

  hh. Other [RECORD]

  ii. Don't Know/Not Sure


10. How important was the help you received from [CASE MANAGER]?

  a. Very Important

  b. Somewhat Important

  c. Not Very Important → [GO TO QUESTION 14]

  d. Not at all Important → [GO TO QUESTION 14]

  e. Don't Know/Not Sure → [GO TO QUESTION 14]


11. In what ways was it important? [RECORD ANSWER]

12. How satisfied are you with the help you received from [CASE MANAGER]?
    a. Very Satisfied
    b. Somewhat Satisfied
    c. Somewhat Dissatisfied
    d. Very Dissatisfied
    e. Don't Know/Not Sure → [GO TO QUESTION 16]


13. Why did you choose that answer? [RECORD REASON]


14. The [READ HAN NAME] nurses try to make it easier for patients to take care of their health, even if it means helping with other kinds of problems. Would you say the help you received from [CASE MANAGER] made it easier for you to take care of your health (your child's health)?
    a. Yes
    b. No → [GO TO QUESTION 16]
    c. Don't Know/Not Sure → [GO TO QUESTION 16]


15. How did it make it easier? [RECORD ANSWER]


16. Could [CASE MANAGER] have been more helpful to you? If yes, how? [RECORD ANSWER]


17. In general, how would you rate your (your child's) overall health? Would you say it is "excellent", "good", "fair" or "poor"?
    a. Excellent
    b. Good
    c. Fair
    d. Poor
    e. Don't Know/Not Sure


**That is all the questions I have today. Thank you for your help.**

## 7. *HAN-Aligned PCMH Targeted Survey Instrument*

The Oklahoma Health Care Authority (OHCA) would like to hear about your experience as a SoonerCare (Medicaid) Patient Centered Medical Home (PCMH) affiliated with a SoonerCare Health Access Network (HAN) (NAME HERE).  The Pacific Health Policy Group (PHPG), an outside company, has been contracted by the OHCA to survey SoonerCare PCMH providers. The purpose of the survey is to gather information on the type of assistance you may have received from the Health Access Network and its importance to your practice.

**Awareness of SoonerCare and the (NAME HERE) Health Access Network**

18. Were you aware that your practice is designated as a "Patient Centered Medical Home" within the Oklahoma SoonerCare (Medicaid) program?

    a.  Yes

    b.  No

19. Were you aware that PCMH practices in SoonerCare receive a monthly case management fee for each SoonerCare member on their panel, and that the fee amount is based in part on the practice's "tier level"?

    a.  Yes

    b.  No

20. Were you aware that, as part of SoonerCare, your practice is affiliated with **(NAME HERE)**?

    a.  Yes

    b.  No

*If you answered "no" to question 3, please complete the final page and return. Do not answer the remaining questions.*

**Health Access Network Activities**

21. SoonerCare Health Access Networks provide support to medical practices with which they are affiliated. Which of these kinds of support, if any, has **(NAME HERE)** provided to your practice? (Select all that apply, or select "K. None" if no support provided)

    a. Assistance in qualifying for a higher PCMH tier level under SoonerCare (i.e., moving from Tier 1 to Tier 2 or 3, or moving from Tier 2 to Tier 3)

    b. Assistance in preparing for, and/or undergoing audits performed by the Oklahoma Health Care Authority's Quality Assurance department

    c. Adoption of evidence-based guidelines for the care of patients with chronic health conditions

    d. Care management of SoonerCare patients with complex healthcare needs and/or chronic health conditions

    e. Care management of SoonerCare patients who are frequent users of the emergency room

    f. Facilitating use of telehealth or telemedicine

    g. Facilitating referrals/patient access to specialty care

    h. Facilitating referrals/patient access to ancillary services (e.g., transportation)

    i. Facilitating referrals/patient access to social services (e.g., heating assistance, rental assistance, food)

    j. Other.  Please specify: _____

    k. None **(Please go to Question 6)**

22. For each of the areas you identified in question four, please record your level of satisfaction with assistance your practice received.  Include any additional comments explaining your ratings in the space provided.

| Support Area | Very Satisfied | Somewhat Satisfied | Somewhat Dissatisfied | Very Dissatisfied |
|---|---|---|---|---|
| A.   Higher tier level support | | | | |
| B.   Audit support | | | | |
| C.   Evidence-based guidelines | | | | |
| D.   Complex/chronic care mgmt. | | | | |
| E.   High ER utilizer care mgmt. | | | | |

| Support Area | Very Satisfied | Somewhat Satisfied | Somewhat Dissatisfied | Very Dissatisfied |
|---|---|---|---|---|
| F. Telehealth/telemedicine | | | | |
| G. Specialty care referrals | | | | |
| H. Ancillary service referrals | | | | |
| I. Social service referrals | | | | |
| J. Other | | | | |

Additional Comments: _____

_____

_____

23. Overall, how satisfied are you with the support your practice has received from (NAME HERE)

    a. Very satisfied

    b. Somewhat satisfied

    c. Somewhat dissatisfied

    d. Very dissatisfied

    e. No opinion

24. Other than raising payment amounts, are there ways in which the SoonerCare program overall, or (NAME HERE) could better support your practice? If yes, please describe how in the space provided.

    a. Yes

    b. No

Additional Support:

_____

_____

## 8. HMP CEM Covariate Balance Tables for CAHPS Measures

| HAN AND HMP PROGRAMS - STATEWIDE<br><br>CAHPS Measures | All Data (pre-balancing) | | | Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| | Treatment Group Mean | Comparison Mean | Standardized Difference | Treatment Group Mean | Comparison Mean | Standardized Difference |
| *All Measures* | | | | | | |
| **HMP Adults** | | | | | | |
| Age Range* | 4.002 | 4.372 | -0.342 | 4.002 | 4.002 | 0.000 |
| Sex (0 = male; 1 = female) | 0.626 | 0.674 | -0.100 | 0.626 | 0.626 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | N/A | N/A | N/A | N/A | N/A | N/A |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | N/A | N/A | N/A | N/A | N/A | N/A |
| | | | | | | |
| **HMP Children** | | | | *Same population as CAD Beta Blocker* | | |
| Age | 11.581 | 14.127 | -0.641 | 11.581 | 11.282 | 0.075 |
| Sex (0 = male; 1 = female) | 0.364 | 0.484 | -0.249 | 0.364 | 0.364 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | N/A | N/A | N/A | N/A | N/A | N/A |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | N/A | N/A | N/A | N/A | N/A | N/A |

\*     Adult age ranges: 1 - 18-24; 2 - 25-34; 3 - 35-44; 4 - 45-54; 5 - 55-64; 6 - 65-74; 7 - 75 or older

## 9. HMP Statistical Significance Test Results for CAHPS Measures

| CAHPS Measure | Adults | | | | | Children | | |
|---|---|---|---|---|---|---|---|---|
| | HMP N = 591 | Comparison Group N = 213 | P-Value | | | HMP N = 77 | Comparison Group N = 668 | P-Value |
| **Getting Needed Care (Composite)** | | | | | | | | |
| Always or Usually | 76.5% | 85.1% | 0.0043 | | | 85.9% | 87.8% | 0.3160 |
| **Rating of Health Care (8, 9 or 10)** | | | | | | | | |
| 8 - 10 | 71.8% | 72.8% | 0.3902 | | | 85.9% | 85.1% | 0.4258 |
| **Rating of Health Plan (8, 9 or 10)** | | | | | | | | |
| 8 - 10 | 82.3% | 71.3% | 0.0004 | | | 82.8% | 81.6% | 0.3982 |

## 10. HMP CEM Covariate Balance Tables (Pre- and Post-Matching) 2019 - 2021

| HEALTH MANAGEMENT PROGRAM - STATEWIDE | 2019 All Data (pre-balancing) | | | 2019 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HMP Mean | Comparison Mean | Standardized Difference | HMP Mean | Comparison Mean | Standardized Difference |
| **HEDIS Measures** | | | | | | |
| **Asthma - Medication Ratio - 5 to 18 years** | | | | | | |
| Age | 12.218 | 11.073 | 0.306 | 12.218 | 12.218 | 0.000 |
| Gender (0 = male; 1 = female) | 0.508 | 0.493 | 0.031 | 0.508 | 0.508 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.361 | 0.581 | -0.459 | 0.361 | 0.361 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.341 | 0.038 | 0.640 | 0.341 | 0.341 | 0.000 |
| **Asthma - Medication Ratio - 19 to 64 years** | | | | | | |
| Age | 50.698 | 38.670 | 1.141 | 50.698 | 50.672 | 0.002 |
| Sex (0 = male; 1 = female) | 0.645 | 0.689 | -0.092 | 0.645 | 0.645 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.581 | 0.600 | -0.040 | 0.581 | 0.581 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.766 | 0.428 | 0.797 | 0.766 | 0.766 | 0.000 |
| **CAD - Persistent Beta-Blocker Treatment after a Heart Attack** | | | | | | |
| Age | 56.602 | 54.758 | 0.268 | 56.662 | 56.531 | 0.019 |
| Sex (0 = male; 1 = female) | 0.505 | 0.526 | -0.042 | 0.510 | 0.510 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.607 | 0.620 | -0.028 | 0.610 | 0.610 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.876 | 0.831 | 0.137 | 0.882 | 0.882 | 0.000 |
| **CAD - Cholesterol Management - LDL-C Test** | *Same population as CAD Beta Blocker* | | | *Same population as CAD Beta Blocker* | | |
| Age | 56.602 | 54.758 | 0.268 | 56.662 | 56.531 | 0.019 |
| Sex (0 = male; 1 = female) | 0.505 | 0.526 | -0.042 | 0.510 | 0.510 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.607 | 0.620 | -0.028 | 0.610 | 0.610 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.876 | 0.831 | 0.137 | 0.882 | 0.882 | 0.000 |

| HEALTH MANAGEMENT PROGRAM - STATEWIDE | 2019 All Data (pre-balancing) | | | 2019 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HMP Mean | Comparison Mean | Standardized Difference | HMP Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **COPD - Use of Spirometry Testing** | | | | | | |
| Age | 54.640 | 46.804 | 0.960 | 54.804 | 54.578 | 0.028 |
| Sex (0 = male; 1 = female) | 0.645 | 0.626 | 0.040 | 0.650 | 0.650 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.637 | 0.648 | -0.023 | 0.639 | 0.639 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.861 | 0.656 | 0.591 | 0.865 | 0.865 | 0.000 |
| | | | | | | |
| **COPD - Pharmacotherapy Management of Exacerbation - 14 days** | | | | | | |
| Age | 56.578 | 52.715 | 0.620 | 56.531 | 56.354 | 0.029 |
| Sex (0 = male; 1 = female) | 0.640 | 0.684 | -0.092 | 0.641 | 0.641 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.592 | 0.630 | -0.076 | 0.589 | 0.589 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.886 | 0.837 | 0.156 | 0.895 | 0.895 | 0.000 |
| | | | | | | |
| **COPD - Pharmacotherapy Management of Exacerbation - 30 days** | *Same population as 14 days* | | | *Same population as 14 days* | | |
| Age | 56.578 | 52.715 | 0.620 | 56.531 | 56.354 | 0.029 |
| Sex (0 = male; 1 = female) | 0.640 | 0.684 | -0.092 | 0.641 | 0.641 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.592 | 0.630 | -0.076 | 0.589 | 0.589 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.886 | 0.837 | 0.156 | 0.895 | 0.895 | 0.000 |
| | | | | | | |
| **Diabetes - Members who had LDL-C Test** | | | | | | |
| Age | 52.323 | 47.676 | 0.485 | 52.292 | 52.231 | 0.006 |
| Sex (0 = male; 1 = female) | 0.653 | 0.652 | 0.003 | 0.653 | 0.653 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.587 | 0.617 | -0.062 | 0.586 | 0.586 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.796 | 0.688 | 0.266 | 0.795 | 0.795 | 0.000 |
| | | | | | | |
| **Diabetes - Retinal Eye Exam** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 52.323 | 47.676 | 0.485 | 52.292 | 52.231 | 0.006 |
| Sex (0 = male; 1 = female) | 0.653 | 0.652 | 0.003 | 0.653 | 0.653 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.587 | 0.617 | -0.062 | 0.586 | 0.586 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.796 | 0.688 | 0.266 | 0.795 | 0.795 | 0.000 |

| HEALTH MANAGEMENT PROGRAM - STATEWIDE | 2019 All Data (pre-balancing) | | | 2019 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HMP Mean | Comparison Mean | Standardized Difference | HMP Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **Diabetes - HbA1c Testing** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 52.323 | 47.676 | 0.485 | 52.292 | 52.231 | 0.006 |
| Sex (0 = male; 1 = female) | 0.653 | 0.652 | 0.003 | 0.653 | 0.653 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.587 | 0.617 | -0.062 | 0.586 | 0.586 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.796 | 0.688 | 0.266 | 0.795 | 0.795 | 0.000 |
| | | | | | | |
| **Diabetes - Medical Attention for Nephropathy** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 52.323 | 47.676 | 0.485 | 52.292 | 52.231 | 0.006 |
| Sex (0 = male; 1 = female) | 0.653 | 0.652 | 0.003 | 0.653 | 0.653 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.587 | 0.617 | -0.062 | 0.586 | 0.586 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.796 | 0.688 | 0.266 | 0.795 | 0.795 | 0.000 |
| | | | | | | |
| **Hypertension - LDL-C Test** | | | | | | |
| Age | 53.422 | 49.071 | 0.474 | 53.388 | 53.311 | 0.008 |
| Sex (0 = male; 1 = female) | 0.610 | 0.612 | -0.003 | 0.611 | 0.611 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.577 | 0.607 | -0.061 | 0.576 | 0.576 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.803 | 0.684 | 0.301 | 0.803 | 0.803 | 0.000 |
| | | | | | | |
| **Hypertension - ACE/ARB Therapy** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 53.422 | 49.071 | 0.474 | 53.388 | 53.311 | 0.008 |
| Sex (0 = male; 1 = female) | 0.610 | 0.612 | -0.003 | 0.611 | 0.611 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.577 | 0.607 | -0.061 | 0.576 | 0.576 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.803 | 0.684 | 0.301 | 0.803 | 0.803 | 0.000 |
| | | | | | | |
| **Opioid - Use of Opioids at High Dosage** | | | | | | |
| Age | 53.402 | 47.712 | 0.645 | 53.423 | 53.388 | 0.004 |
| Sex (0 = male; 1 = female) | 0.643 | 0.698 | -0.114 | 0.643 | 0.643 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.645 | 0.639 | 0.012 | 0.645 | 0.645 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.833 | 0.620 | 0.571 | 0.834 | 0.834 | 0.000 |

| HEALTH MANAGEMENT PROGRAM - STATEWIDE | 2019 All Data (pre-balancing) | | | 2019 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HMP Mean | Comparison Mean | Standardized Difference | HMP Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| | | | | | | |
| **Opioid - Concurrent Use of Opioids and Benzodiazepines** | | | | | | |
| Age | 52.710 | 45.810 | 0.740 | 52.655 | 52.554 | 0.011 |
| Sex (0 = male; 1 = female) | 0.659 | 0.709 | -0.105 | 0.660 | 0.660 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.635 | 0.632 | 0.006 | 0.636 | 0.636 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.809 | 0.566 | 0.618 | 0.809 | 0.809 | 0.000 |
| | | | | | | |
| **Child and Adolescents' Access to PCP - 12 months to 19 years** | | | | | | |
| Age | 11.843 | 9.025 | 0.619 | 11.843 | 11.843 | 0.000 |
| Sex (0 = male; 1 = female) | 0.507 | 0.492 | 0.030 | 0.507 | 0.507 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.374 | 0.576 | -0.417 | 0.374 | 0.374 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.357 | 0.033 | 0.676 | 0.357 | 0.357 | 0.000 |
| | | | | | | |
| **Adults' Access to Preventive/Ambulatory Health Services** | | | | | | |
| Age | 51.247 | 39.761 | 10.087 | 51.247 | 51.139 | 0.010 |
| Sex (0 = male; 1 = female) | 0.641 | 0.694 | -0.111 | 0.641 | 0.641 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.582 | 0.598 | -0.033 | 0.582 | 0.582 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.773 | 0.441 | 0.793 | 0.773 | 0.773 | 0.000 |

| HEALTH MANAGEMENT PROGRAM - STATEWIDE | 2019 All Data (pre-balancing) | | | 2019 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HMP Mean | Comparison Mean | Standardized Difference | HMP Mean | Comparison Mean | Standardized Difference |
| *Utilization/Expenditure Measures* | | | | | | |
| **Emergency Room Visits (per 1,000 member months) - All** | | | | | | |
| Age | 48.869 | 13.419 | 2.559 | 48.840 | 48.813 | 0.002 |
| Sex | 0.649 | 0.518 | 0.275 | 0.649 | 0.649 | 0.000 |
| Urban/Rural | 0.599 | 0.564 | 0.071 | 0.599 | 0.599 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.791 | 0.098 | 1.703 | 0.792 | 0.792 | 0.000 |
| Prior Year PMPM - Top 2% | 0.272 | 0.047 | 0.506 | 0.272 | 0.272 | 0.000 |
| **Hospital Admissions (per 100,000 member months) - All** | *Same population as Emergency Room* | | | *Same population as Emergency Room* | | |
| Age | 48.869 | 13.419 | 2.559 | 48.840 | 48.813 | 0.002 |
| Sex | 0.649 | 0.518 | 0.275 | 0.649 | 0.649 | 0.000 |
| Urban/Rural | 0.599 | 0.564 | 0.071 | 0.599 | 0.599 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.791 | 0.098 | 1.703 | 0.792 | 0.792 | 0.000 |
| Prior Year PMPM - Top 2% | 0.272 | 0.047 | 0.506 | 0.272 | 0.272 | 0.000 |
| **Hospital Readmission Rate - All** | *Same population as Emergency Room* | | | *Same population as Emergency Room* | | |
| Age | 48.869 | 13.419 | 2.559 | 48.840 | 48.813 | 0.002 |
| Sex | 0.649 | 0.518 | 0.275 | 0.649 | 0.649 | 0.000 |
| Urban/Rural | 0.599 | 0.564 | 0.071 | 0.599 | 0.599 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.791 | 0.098 | 1.703 | 0.792 | 0.792 | 0.000 |
| Prior Year PMPM - Top 2% | 0.272 | 0.047 | 0.506 | 0.272 | 0.272 | 0.000 |
| **Per Member Per Month Expenditures - All** | *Same population as Emergency Room* | | | *Same population as Emergency Room* | | |
| Age | 48.869 | 13.419 | 2.559 | 48.840 | 48.813 | 0.002 |
| Sex | 0.649 | 0.518 | 0.275 | 0.649 | 0.649 | 0.000 |
| Urban/Rural | 0.599 | 0.564 | 0.071 | 0.599 | 0.599 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.791 | 0.098 | 1.703 | 0.792 | 0.792 | 0.000 |
| Prior Year PMPM - Top 5% | 0.272 | 0.047 | 0.506 | 0.272 | 0.272 | 0.000 |

| HEALTH MANAGEMENT PROGRAM - STATEWIDE | 2020 All Data (pre-balancing) | | | 2020 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HMP Mean | Comparison Mean | Standardized Difference | HMP Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **Asthma - Medication Ratio - 5 to 18 years** | | | | | | |
| Age | 12.873 | 11.139 | 0.447 | 12.873 | 12.873 | 0.000 |
| Gender (0 = male; 1 = female) | 0.522 | 0.492 | 0.061 | 0.522 | 0.522 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.409 | 0.576 | -0.340 | 0.409 | 0.409 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.252 | 0.034 | 0.502 | 0.252 | 0.252 | 0.000 |
| | | | | | | |
| **Asthma - Medication Ratio - 19 to 64 years** | | | | | | |
| Age | 47.820 | 35.222 | 1.055 | 47.820 | 47.788 | 0.003 |
| Sex (0 = male; 1 = female) | 0.701 | 0.699 | 0.004 | 0.701 | 0.701 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.529 | 0.580 | -0.104 | 0.529 | 0.529 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.638 | 0.285 | 0.736 | 0.638 | 0.638 | 0.000 |
| | | | | | | |
| **CAD - Persistent Beta-Blocker Treatment after a Heart Attack** | | | | | | |
| Age | 56.889 | 55.551 | 0.198 | 56.952 | 56.952 | 0.000 |
| Sex (0 = male; 1 = female) | 0.511 | 0.509 | 0.005 | 0.506 | 0.506 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.576 | 0.623 | -0.094 | 0.580 | 0.580 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.856 | 0.824 | 0.092 | 0.865 | 0.865 | 0.000 |
| | | | | | | |
| **CAD - Cholesterol Management - LDL-C Test** | *Same population as CAD Beta Blocker* | | | *Same population as CAD Beta Blocker* | | |
| Age | 56.889 | 55.551 | 0.198 | 56.952 | 56.952 | 0.000 |
| Sex (0 = male; 1 = female) | 0.511 | 0.509 | 0.005 | 0.506 | 0.506 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.576 | 0.623 | -0.094 | 0.580 | 0.580 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.856 | 0.824 | 0.092 | 0.865 | 0.865 | 0.000 |

| HEALTH MANAGEMENT PROGRAM - STATEWIDE | 2020 All Data (pre-balancing) | | | 2020 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HMP Mean | Comparison Mean | Standardized Difference | HMP Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **COPD - Use of Spirometry Testing** | | | | | | |
| Age | 52.325 | 37.031 | 1.318 | 52.414 | 52.267 | 0.013 |
| Sex (0 = male; 1 = female) | 0.629 | 0.553 | 0.157 | 0.634 | 0.634 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.591 | 0.611 | -0.041 | 0.596 | 0.596 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.861 | 0.656 | 0.591 | 0.865 | 0.865 | 0.000 |
| | | | | | | |
| **COPD - Pharmacotherapy Management of Exacerbation - 14 days** | | | | | | |
| Age | 55.660 | 53.066 | 0.369 | 55.780 | 55.737 | 0.006 |
| Sex (0 = male; 1 = female) | 0.618 | 0.645 | -0.055 | 0.627 | 0.627 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.557 | 0.585 | -0.057 | 0.550 | 0.550 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.901 | 0.821 | 0.268 | 0.909 | 0.909 | 0.000 |
| | | | | | | |
| **COPD - Pharmacotherapy Management of Exacerbation - 30 days** | *Same population as 14 days* | | | *Same population as 14 days* | | |
| Age | 55.660 | 53.066 | 0.369 | 55.780 | 55.737 | 0.006 |
| Sex (0 = male; 1 = female) | 0.618 | 0.645 | -0.055 | 0.627 | 0.627 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.557 | 0.585 | -0.057 | 0.550 | 0.550 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.901 | 0.821 | 0.268 | 0.909 | 0.909 | 0.000 |
| | | | | | | |
| **Diabetes - Members who had LDL-C Test** | | | | | | |
| Age | 51.814 | 46.351 | 0.538 | 51.806 | 51.738 | 0.007 |
| Sex (0 = male; 1 = female) | 0.651 | 0.667 | -0.034 | 0.651 | 0.651 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.547 | 0.597 | -0.101 | 0.548 | 0.548 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.748 | 0.586 | 0.374 | 0.748 | 0.748 | 0.000 |
| | | | | | | |
| **Diabetes - Retinal Eye Exam** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 51.814 | 46.351 | 0.538 | 51.806 | 51.738 | 0.007 |
| Sex (0 = male; 1 = female) | 0.651 | 0.667 | -0.034 | 0.651 | 0.651 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.547 | 0.597 | -0.101 | 0.548 | 0.548 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.748 | 0.586 | 0.374 | 0.748 | 0.748 | 0.000 |

| HEALTH MANAGEMENT PROGRAM - STATEWIDE | 2020 All Data (pre-balancing) | | | 2020 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HMP Mean | Comparison Mean | Standardized Difference | HMP Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **Diabetes - HbA1c Testing** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 51.814 | 46.351 | 0.538 | 51.806 | 51.738 | 0.007 |
| Sex (0 = male; 1 = female) | 0.651 | 0.667 | -0.034 | 0.651 | 0.651 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.547 | 0.597 | -0.101 | 0.548 | 0.548 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.748 | 0.586 | 0.374 | 0.748 | 0.748 | 0.000 |
| | | | | | | |
| **Diabetes - Medical Attention for Nephropathy** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 51.814 | 46.351 | 0.538 | 51.806 | 51.738 | 0.007 |
| Sex (0 = male; 1 = female) | 0.651 | 0.667 | -0.034 | 0.651 | 0.651 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.547 | 0.597 | -0.101 | 0.548 | 0.548 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.748 | 0.586 | 0.374 | 0.748 | 0.748 | 0.000 |
| | | | | | | |
| **Hypertension - LDL-C Test** | | | | | | |
| Age | 52.680 | 47.621 | 0.522 | 52.680 | 52.630 | 0.005 |
| Sex (0 = male; 1 = female) | 0.632 | 0.624 | 0.017 | 0.632 | 0.632 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.552 | 0.588 | -0.071 | 0.552 | 0.552 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.762 | 0.584 | 0.419 | 0.762 | 0.762 | 0.000 |
| | | | | | | |
| **Hypertension - ACE/ARB Therapy** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 52.680 | 47.621 | 0.522 | 52.680 | 52.630 | 0.005 |
| Sex (0 = male; 1 = female) | 0.632 | 0.624 | 0.017 | 0.632 | 0.632 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.552 | 0.588 | -0.071 | 0.552 | 0.552 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.762 | 0.584 | 0.419 | 0.762 | 0.762 | 0.000 |
| | | | | | | |
| **Opioid - Use of Opioids at High Dosage** | | | | | | |
| Age | 52.168 | 47.419 | 0.494 | 52.193 | 52.149 | 0.005 |
| Sex (0 = male; 1 = female) | 0.655 | 0.702 | -0.098 | 0.656 | 0.656 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.605 | 0.602 | 0.006 | 0.606 | 0.606 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.754 | 0.575 | 0.417 | 0.754 | 0.754 | 0.000 |

| HEALTH MANAGEMENT PROGRAM - STATEWIDE | 2020 All Data (pre-balancing) | | | 2020 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HMP Mean | Comparison Mean | Standardized Difference | HMP Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| | | | | | | |
| **Opioid - Concurrent Use of Opioids and Benzodiazepines** | | | | | | |
| Age | 51.291 | 45.297 | 0.585 | 51.284 | 51.226 | 0.006 |
| Sex (0 = male; 1 = female) | 0.673 | 0.716 | -0.092 | 0.673 | 0.673 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.580 | 0.600 | -0.040 | 0.580 | 0.580 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.717 | 0.514 | 0.452 | 0.718 | 0.718 | 0.000 |
| | | | | | | |
| **Child and Adolescents' Access to PCP - 12 months to 19 years** | | | | | | |
| Age | 13.464 | 9.254 | 0.954 | 13.464 | 13.464 | 0.000 |
| Sex (0 = male; 1 = female) | 0.546 | 0.493 | 0.107 | 0.546 | 0.546 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.421 | 0.574 | -0.310 | 0.421 | 0.421 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.249 | 0.029 | 0.509 | 0.249 | 0.249 | 0.000 |
| | | | | | | |
| **Adults' Access to Preventive/Ambulatory Health Services** | | | | | | |
| Age | 48.603 | 37.771 | 0.917 | 48.603 | 48.536 | 0.006 |
| Sex (0 = male; 1 = female) | 0.695 | 0.725 | -0.066 | 0.695 | 0.695 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.530 | 0.578 | -0.097 | 0.530 | 0.530 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.653 | 0.320 | 0.699 | 0.653 | 0.653 | 0.000 |

| HEALTH MANAGEMENT PROGRAM - STATEWIDE | 2020 All Data (pre-balancing) | | | 2020 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HMP Mean | Comparison Mean | Standardized Difference | HMP Mean | Comparison Mean | Standardized Difference |
| *Utilization/Expenditure Measures* | | | | | | |
| **Emergency Room Visits (per 1,000 member months) - All** | | | | | | |
| Age | 46.526 | 13.515 | 2.247 | 46.417 | 46.308 | 0.007 |
| Sex | 0.687 | 0.519 | 0.364 | 0.688 | 0.688 | 0.000 |
| Urban/Rural | 0.535 | 0.574 | -0.080 | 0.535 | 0.535 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.662 | 0.087 | 1.216 | 0.666 | 0.666 | 0.000 |
| Prior Year PMPM - Top 5% | 0.263 | 0.046 | 0.494 | 0.264 | 0.264 | 0.000 |
| **Hospital Admissions (per 100,000 member months) - All** | *Same population as Emergency Room* | | | *Same population as Emergency Room* | | |
| Age | 46.526 | 13.515 | 2.247 | 46.417 | 46.308 | 0.007 |
| Sex | 0.687 | 0.519 | 0.364 | 0.688 | 0.688 | 0.000 |
| Urban/Rural | 0.535 | 0.574 | -0.080 | 0.535 | 0.535 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.662 | 0.087 | 1.216 | 0.666 | 0.666 | 0.000 |
| Prior Year PMPM - Top 5% | 0.263 | 0.046 | 0.494 | 0.264 | 0.264 | 0.000 |
| **Hospital Readmission Rate - All** | *Same population as Emergency Room* | | | *Same population as Emergency Room* | | |
| Age | 46.526 | 13.515 | 2.247 | 46.417 | 46.308 | 0.007 |
| Sex | 0.687 | 0.519 | 0.364 | 0.688 | 0.688 | 0.000 |
| Urban/Rural | 0.535 | 0.574 | -0.080 | 0.535 | 0.535 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.662 | 0.087 | 1.216 | 0.666 | 0.666 | 0.000 |
| Prior Year PMPM - Top 5% | 0.263 | 0.046 | 0.494 | 0.264 | 0.264 | 0.000 |
| **Per Member Per Month Expenditures - All** | *Same population as Emergency Room* | | | *Same population as Emergency Room* | | |
| Age | 46.526 | 13.515 | 2.247 | 46.417 | 46.308 | 0.007 |
| Sex | 0.687 | 0.519 | 0.364 | 0.688 | 0.688 | 0.000 |
| Urban/Rural | 0.535 | 0.574 | -0.080 | 0.535 | 0.535 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.662 | 0.087 | 1.216 | 0.666 | 0.666 | 0.000 |
| Prior Year PMPM - Top 5% | 0.263 | 0.046 | 0.494 | 0.264 | 0.264 | 0.000 |

| HEALTH MANAGEMENT PROGRAM - STATEWIDE | 2021 All Data (pre-balancing) | | | 2021 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HMP Mean | Comparison Mean | Standardized Difference | HMP Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **Asthma - Medication Ratio - 5 to 18 years** | | | | | | |
| Age | 12.347 | 11.257 | 0.278 | 12.347 | 12.347 | 0.000 |
| Gender (0 = male; 1 = female) | 0.433 | 0.491 | -0.115 | 0.434 | 0.434 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.403 | 0.589 | -0.380 | 0.403 | 0.403 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.511 | 0.029 | 0.963 | 0.511 | 0.511 | 0.000 |
| | | | | | | |
| **Asthma - Medication Ratio - 19 to 64 years** | | | | | | |
| Age | 48.795 | 33.357 | 1.295 | 48.795 | 48.771 | 0.002 |
| Sex (0 = male; 1 = female) | 0.671 | 0.688 | -0.036 | 0.671 | 0.671 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.513 | 0.594 | -0.163 | 0.513 | 0.513 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.701 | 0.233 | 1.022 | 0.701 | 0.701 | 0.000 |
| | | | | | | |
| **CAD - Persistent Beta-Blocker Treatment after a Heart Attack** | | | | | | |
| Age | 57.565 | 55.940 | 0.000 | 57.452 | 57.295 | 0.023 |
| Sex (0 = male; 1 = female) | 0.506 | 0.501 | 0.000 | 0.501 | 0.501 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.566 | 0.622 | 0.000 | 0.569 | 0.569 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.701 | 0.233 | 1.022 | 0.701 | 0.701 | 0.000 |
| | | | | | | |
| **CAD - Cholesterol Management - LDL-C Test** | *Same population as CAD Beta Blocker* | | | *Same population as CAD Beta Blocker* | | |
| Age | 57.565 | 55.940 | 0.000 | 57.452 | 57.295 | 0.023 |
| Sex (0 = male; 1 = female) | 0.506 | 0.501 | 0.000 | 0.501 | 0.501 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.566 | 0.622 | 0.000 | 0.569 | 0.569 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.701 | 0.233 | 1.022 | 0.701 | 0.701 | 0.000 |

| HEALTH MANAGEMENT PROGRAM - STATEWIDE | 2021 All Data (pre-balancing) | | | 2021 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HMP Mean | Comparison Mean | Standardized Difference | HMP Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **COPD - Use of Spirometry Testing** | | | | | | |
| Age | 56.017 | 53.918 | 0.314 | 56.125 | 56.068 | 0.009 |
| Sex (0 = male; 1 = female) | 0.612 | 0.629 | -0.035 | 0.617 | 0.617 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.593 | 0.671 | -0.159 | 0.598 | 0.598 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.861 | 0.656 | 0.591 | 0.865 | 0.865 | 0.000 |
| | | | | | | |
| **COPD - Pharmacotherapy Management of Exacerbation - 14 days** | | | | | | |
| Age | 57.507 | 56.097 | 0.224 | 57.863 | 57.952 | -0.014 |
| Sex (0 = male; 1 = female) | 0.637 | 0.659 | -0.046 | 0.669 | 0.669 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.541 | 0.633 | -0.184 | 0.547 | 0.547 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.861 | 0.656 | 0.591 | 0.865 | 0.865 | 0.000 |
| | | | | | | |
| **COPD - Pharmacotherapy Management of Exacerbation - 30 days** | *Same population as 14 days* | | | *Same population as 14 days* | | |
| Age | 57.507 | 56.097 | 0.224 | 57.863 | 57.952 | -0.014 |
| Sex (0 = male; 1 = female) | 0.637 | 0.659 | -0.046 | 0.669 | 0.669 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.541 | 0.633 | -0.184 | 0.547 | 0.547 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.861 | 0.656 | 0.591 | 0.865 | 0.865 | 0.000 |
| | | | | | | |
| **Diabetes - Members who had LDL-C Test** | | | | | | |
| Age | 52.790 | 46.105 | 0.663 | 52.701 | 52.668 | 0.003 |
| Sex (0 = male; 1 = female) | 0.633 | 0.677 | -0.090 | 0.631 | 0.631 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.534 | 0.618 | -0.167 | 0.531 | 0.531 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.748 | 0.586 | 0.374 | 0.748 | 0.748 | 0.000 |
| | | | | | | |
| **Diabetes - Retinal Eye Exam** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 52.790 | 46.105 | 0.663 | 52.701 | 52.668 | 0.003 |
| Sex (0 = male; 1 = female) | 0.633 | 0.677 | -0.090 | 0.631 | 0.631 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.534 | 0.618 | -0.167 | 0.531 | 0.531 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.748 | 0.586 | 0.374 | 0.748 | 0.748 | 0.000 |

| HEALTH MANAGEMENT PROGRAM - STATEWIDE | 2021 All Data (pre-balancing) | | | 2021 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HMP Mean | Comparison Mean | Standardized Difference | HMP Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| **Diabetes - HbA1c Testing** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 52.790 | 46.105 | 0.663 | 52.701 | 52.668 | 0.003 |
| Sex (0 = male; 1 = female) | 0.633 | 0.677 | -0.090 | 0.631 | 0.631 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.534 | 0.618 | -0.167 | 0.531 | 0.531 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.748 | 0.586 | 0.374 | 0.748 | 0.748 | 0.000 |
| | | | | | | |
| **Diabetes - Medical Attention for Nephropathy** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 52.790 | 46.105 | 0.663 | 52.701 | 52.668 | 0.003 |
| Sex (0 = male; 1 = female) | 0.633 | 0.677 | -0.090 | 0.631 | 0.631 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.534 | 0.618 | -0.167 | 0.531 | 0.531 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.748 | 0.586 | 0.374 | 0.748 | 0.748 | 0.000 |
| | | | | | | |
| **Hypertension - LDL-C Test** | | | | | | |
| Age | 53.999 | 48.613 | 0.567 | 53.992 | 53.956 | 0.004 |
| Sex (0 = male; 1 = female) | 0.605 | 0.617 | -0.025 | 0.605 | 0.605 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.535 | 0.610 | -0.152 | 0.535 | 0.535 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.762 | 0.584 | 0.419 | 0.762 | 0.762 | 0.000 |
| | | | | | | |
| **Hypertension - ACE/ARB Therapy** | *Same population as LDL-C* | | | *Same population as LDL-C* | | |
| Age | 53.999 | 48.613 | 0.567 | 53.992 | 53.956 | 0.004 |
| Sex (0 = male; 1 = female) | 0.605 | 0.617 | -0.025 | 0.605 | 0.605 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.535 | 0.610 | -0.152 | 0.535 | 0.535 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.762 | 0.584 | 0.419 | 0.762 | 0.762 | 0.000 |
| | | | | | | |
| **Opioid - Use of Opioids at High Dosage** | | | | | | |
| Age | 53.954 | 48.313 | 0.563 | 53.575 | 53.475 | 0.011 |
| Sex (0 = male; 1 = female) | 0.654 | 0.698 | -0.092 | 0.655 | 0.655 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.597 | 0.629 | -0.065 | 0.596 | 0.596 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.754 | 0.575 | 0.417 | 0.754 | 0.754 | 0.000 |

| HEALTH MANAGEMENT PROGRAM - STATEWIDE | 2021 All Data (pre-balancing) | | | 2021 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HMP Mean | Comparison Mean | Standardized Difference | HMP Mean | Comparison Mean | Standardized Difference |
| *HEDIS Measures* | | | | | | |
| | | | | | | |
| **Opioid - Concurrent Use of Opioids and Benzodiazepines** | | | | | | |
| Age | 52.772 | 45.450 | 0.734 | 52.772 | 52.696 | 0.000 |
| Sex (0 = male; 1 = female) | 0.671 | 0.720 | 0.000 | 0.671 | 0.008 | 2.946 |
| Urban/Rural (0 = urban; 1 = rural) | 0.576 | 0.626 | 0.000 | 0.576 | 0.576 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.717 | 0.514 | 0.452 | 0.718 | 0.718 | 0.000 |
| | | | | | | |
| **Child and Adolescents' Access to PCP - 12 months to 19 years** | | | | | | |
| Age | 13.157 | 9.832 | 0.746 | 13.157 | 13.130 | 0.006 |
| Sex (0 = male; 1 = female) | 0.440 | 0.492 | -0.105 | 0.440 | 0.440 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.400 | 0.587 | -0.383 | 0.400 | 0.400 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.249 | 0.029 | 0.509 | 0.249 | 0.249 | 0.000 |
| | | | | | | |
| **Adults' Access to Preventive/Ambulatory Health Services** | | | | | | |
| Age | 49.930 | 37.063 | 1.090 | 49.926 | 49.845 | 0.007 |
| Sex (0 = male; 1 = female) | 0.666 | 0.729 | -0.133 | 0.666 | 0.666 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.516 | 0.594 | -0.156 | 0.516 | 0.516 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.653 | 0.320 | 0.699 | 0.653 | 0.653 | 0.000 |

| HEALTH MANAGEMENT PROGRAM - STATEWIDE | 2021 All Data (pre-balancing) | | | 2021 Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | HMP Mean | Comparison Mean | Standardized Difference | HMP Mean | Comparison Mean | Standardized Difference |
| *Utilization/Expenditure Measures* | | | | | | |
| **Emergency Room Visits (per 1,000 member months) - All** | | | | | | |
| Age | 46.822 | 13.992 | 2.113 | 46.772 | 46.719 | 0.003 |
| Sex | 0.645 | 0.524 | 0.251 | 0.646 | 0.646 | 0.000 |
| Urban/Rural | 0.517 | 0.588 | -0.143 | 0.516 | 0.516 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.740 | 0.078 | 1.508 | 0.742 | 0.742 | 0.000 |
| Prior Year PMPM - Top 5% | 0.268 | 0.045 | 0.504 | 0.269 | 0.269 | 0.000 |
| **Hospital Admissions (per 100,000 member months) - All** | *Same population as Emergency Room* | | | *Same population as Emergency Room* | | |
| Age | 46.822 | 13.992 | 2.113 | 46.772 | 46.719 | 0.003 |
| Sex | 0.645 | 0.524 | 0.251 | 0.646 | 0.646 | 0.000 |
| Urban/Rural | 0.517 | 0.588 | -0.143 | 0.516 | 0.516 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.740 | 0.078 | 1.508 | 0.742 | 0.742 | 0.000 |
| Prior Year PMPM - Top 5% | 0.268 | 0.045 | 0.504 | 0.269 | 0.269 | 0.000 |
| **Hospital Readmission Rate - All** | *Same population as Emergency Room* | | | *Same population as Emergency Room* | | |
| Age | 46.822 | 13.992 | 2.113 | 46.772 | 46.719 | 0.003 |
| Sex | 0.645 | 0.524 | 0.251 | 0.646 | 0.646 | 0.000 |
| Urban/Rural | 0.517 | 0.588 | -0.143 | 0.516 | 0.516 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.740 | 0.078 | 1.508 | 0.742 | 0.742 | 0.000 |
| Prior Year PMPM - Top 5% | 0.268 | 0.045 | 0.504 | 0.269 | 0.269 | 0.000 |
| **Per Member Per Month Expenditures - All** | *Same population as Emergency Room* | | | *Same population as Emergency Room* | | |
| Age | 46.822 | 13.992 | 2.113 | 46.772 | 46.719 | 0.003 |
| Sex | 0.645 | 0.524 | 0.251 | 0.646 | 0.646 | 0.000 |
| Urban/Rural | 0.517 | 0.588 | -0.143 | 0.516 | 0.516 | 0.000 |
| ABD/non-ABD (0 = non-ABD; 1 - ABD) | 0.740 | 0.078 | 1.508 | 0.742 | 0.742 | 0.000 |
| Prior Year PMPM - Top 5% | 0.268 | 0.045 | 0.504 | 0.269 | 0.269 | 0.000 |

## 11. HMP Statistical Significance Test Results - 2019 – 2021 and 3-Year Pooled

| HEALTH MANAGEMENT PROGRAM - HEALTH COACHING | Percent Compliant | | | | P-Value/Statistical Significance (p < .05) | | | |
|---|---|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | 2019 | 2020 | 2021 | Pooled | 2019 | 2020 | 2021 | Pooled |
| *HEDIS Measures* | | | | | | | | |
| **Asthma - Medication Ratio - 5 to 18 years** | | | | | | | | |
| HMP | 72.7% | 75.3% | 88.4% | 78.8% | 0.1570 | 0.0496 | 0.2969 | 0.0000 |
| Comparison Group | 81.5% | 84.3% | 92.4% | 86.1% | No | **Yes** | No | **Yes** |
| **Asthma - Medication Ratio - 19 to 64 years** | | | | | | | | |
| HMP | 80.6% | 78.0% | 90.8% | 83.1% | 0.0448 | 0.7251 | 0.2542 | 0.0001 |
| Comparison Group | 74.1% | 77.0% | 87.2% | 79.4% | **Yes** | No | No | **Yes** |
| **CAD - Persistent Beta-Blocker Treatment after a Heart Attack** | | | | | | | | |
| HMP | 44.1% | 46.0% | 49.6% | 46.6% | 0.5611 | 0.6924 | 0.4286 | 0.2814 |
| Comparison Group | 42.6% | 47.1% | 47.4% | 45.7% | No | No | No | No |
| **CAD - Cholesterol Management - LDL-C Test** | | | | | | | | |
| HMP | 65.8% | 63.6% | 67.3% | 65.6% | 0.0985 | 0.0232 | 0.0000 | 0.0001 |
| Comparison Group | 61.7% | 57.7% | 60.3% | 59.9% | No | **Yes** | **Yes** | **Yes** |
| **COPD - Use of Spirometry Testing** | | | | | | | | |
| HMP | 24.9% | 24.2% | 18.1% | 22.4% | 0.5372 | 0.0171 | 0.0697 | 0.0028 |
| Comparison Group | 23.3% | 18.2% | 14.3% | 18.6% | No | **Yes** | No | **Yes** |
| **COPD - Pharmacotherapy Management of Exacerbation - 14 days** | | | | | | | | |
| HMP | 68.9% | 62.7% | 66.2% | 65.9% | 0.2360 | 0.2583 | 0.1081 | 0.1390 |
| Comparison Group | 64.0% | 67.6% | 66.9% | 66.2% | No | No | No | No |
| **COPD - Pharmacotherapy Management of Exacerbation - 30 days** | | | | | | | | |
| HMP | 76.8% | 69.9% | 80.6% | 75.8% | 0.2900 | 0.5519 | 0.1823 | 0.1315 |
| Comparison Group | 72.7% | 72.3% | 73.6% | 72.9% | No | No | No | No |
| **Diabetes - HbA1c Testing** | | | | | | | | |
| HMP | 80.2% | 77.9% | 80.0% | 79.4% | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Comparison Group | 72.5% | 65.8% | 68.2% | 68.8% | **Yes** | **Yes** | **Yes** | **Yes** |

| HEALTH MANAGEMENT PROGRAM - HEALTH COACHING | Percent Compliant | | | | P-Value/Statistical Significance (p < .05) | | | |
|---|---|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | 2019 | 2020 | 2021 | Pooled | 2019 | 2020 | 2021 | Pooled |
| *HEDIS Measures* | | | | | | | | |
| **Diabetes - LDL-C Test** | | | | | | | | |
| HMP | 65.5% | 64.8% | 67.2% | 65.8% | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Comparison Group | 58.1% | 50.5% | 56.7% | 55.1% | **Yes** | **Yes** | **Yes** | **Yes** |
| **Diabetes - Retinal Eye Exam** | | | | | | | | |
| HMP | 32.2% | 32.8% | 36.0% | 33.7% | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Comparison Group | 25.3% | 19.8% | 21.5% | 22.2% | **Yes** | **Yes** | **Yes** | **Yes** |
| **Diabetes - Medical Attention for Nephropathy** | | | | | | | | |
| HMP | 89.3% | 85.8% | 86.9% | 87.3% | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Comparison Group | 84.7% | 78.6% | 80.7% | 81.3% | **Yes** | **Yes** | **Yes** | **Yes** |
| **Hypertension - LDL-C Test** | | | | | | | | |
| HMP | 62.0% | 61.5% | 64.4% | 62.6% | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Comparison Group | 58.1% | 53.4% | 57.2% | 56.2% | **Yes** | **Yes** | **Yes** | **Yes** |
| **Hypertension - ACE/ARB Therapy** | | | | | | | | |
| HMP | 67.1% | 65.5% | 67.5% | 66.7% | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Comparison Group | 63.8% | 62.8% | 64.1% | 63.6% | **Yes** | **Yes** | **Yes** | **Yes** |
| **Opioid - Use of Opioids at High Dosage** | | | | | | | | |
| HMP | 4.3% | 3.0% | 3.4% | 3.6% | 0.4017 | 0.0000 | 0.2208 | 0.0133 |
| Comparison Group | 4.9% | 4.4% | 4.2% | 4.5% | No | **Yes** | No | **Yes** |
| **Opioid - Concurrent Use of Opioids and Benzodiazepines** | | | | | | | | |
| HMP | 12.9% | 9.2% | 10.2% | 10.8% | 0.0000 | 0.0000 | 0.6626 | 0.0001 |
| Comparison Group | 15.5% | 12.6% | 10.6% | 12.9% | **Yes** | **Yes** | No | **Yes** |
| **Child and Adolescents' Access to PCP - 12 months to 19 years** | | | | | | | | |
| HMP | 98.3% | 99.2% | 98.0% | 98.5% | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Comparison Group | 93.5% | 90.5% | 83.4% | 89.1% | **Yes** | **Yes** | **Yes** | **Yes** |
| **Adults' Access to Preventive/Ambulatory Health Services** | | | | | | | | |
| HMP | 87.4% | 97.2% | 97.5% | 94.0% | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Comparison Group | 88.7% | 84.5% | 82.1% | 85.1% | **Yes** | **Yes** | **Yes** | **Yes** |

| HEALTH MANAGEMENT PROGRAM - HEALTH COACHING | Percent Compliant | | | | P-Value/Statistical Significance (p < .05) | | | |
|---|---|---|---|---|---|---|---|---|
| HEDIS and Utilization/Expenditure Measures | 2019 | 2020 | 2021 | Pooled | 2019 | 2020 | 2021 | Pooled |
| *Utilization/Expenditure Measures* | | | | | | | | |
| **Emergency Room Visits (per 1,000 member months) - All** | | | | | | | | |
| HMP | 162.7 | 142.4 | 137.5 | 147.5 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Comparison Group | 186.8 | 158.9 | 158.0 | 167.9 | **Yes** | **Yes** | **Yes** | **Yes** |
| **Hospital Admissions (per 100,000 member months) - All** | | | | | | | | |
| HMP | 3324.3 | 2736.2 | 2654.5 | 2905.0 | 0.3855 | 0.0000 | 0.0000 | 0.0158 |
| Comparison Group | 3518.2 | 3112.8 | 3161.5 | 3264.2 | No | **Yes** | **Yes** | **Yes** |
| **Hospital Readmission Rate - All** | | | | | | | | |
| HMP | 6.0% | 5.3% | 5.7% | 5.7% | 0.1680 | 0.3613 | 0.4568 | 0.0098 |
| Comparison Group | 6.9% | 5.8% | 6.1% | 6.3% | No | No | No | **Yes** |
| **Per Member Per Month Expenditures - All** | | | | | | | | |
| HMP | $ 550.09 | $ 616.09 | $ 690.77 | $ 618.98 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Comparison Group | $ 728.57 | $ 743.48 | $ 829.46 | $ 767.17 | **Yes** | **Yes** | **Yes** | **Yes** |

## 12. HMP Member Targeted Survey Instrument (SDOH Component)

1. The SoonerCare Health Management Program can help members deal with non-medical problems. For example, the program can help with eligibility issues or getting equipment like a wheelchair or getting help with food, electricity, heating and other needs. Did you know the Health Management Program can provide this kind of help?

   a. Yes

   b. No

   c. Don't Know/Not Sure

2. Some of this help is provided by Community Resource Specialists. Have you heard of the Community Resource Specialists?

   a. Yes

   b. No

   c. Don't Know/Not Sure

3. Have you or your Health Coach used a Community Resource Specialist to help you with a problem like the ones I mentioned? [IF NO] Has your Health Coach himself/herself helped you with a problem like the ones I mentioned?

   a. Yes – CRS helped

   b. Yes – Health Coach helped

   c. No to both → [GO TO Q40]

   d. Don't Know/Note Sure → [GO TO Q40]

4. Thinking about the last time you received help, what problem did get help in resolving?

   a. Housing/rent

   b. Food

   c. Child care

   d. Transportation.  SPECIFY DESTINATION:
      _____

   e. Don't Know/Not Sure

   f. Other.  SPECIFY:
      _____

5. How helpful was the Community Resource Specialist or Health Coach in solving the problem? Would you say s/he was very helpful, somewhat helpful, not very helpful or not at all helpful?

      a.   Very helpful

      b.   Somewhat helpful

      c.   Not very helpful

      d.   Not at all helpful

      e.   Don't Know/Not Sure

6. What did the Community Resource Specialist or Health Coach do?

      a.   RECORD:

           _____

      b.   Don't Know/Not Sure

## 13. *Retroactive Eligibility Analysis Survey Instrument*

Hello, my name is _____ and I am calling on behalf of the Oklahoma SoonerCare program.  May I please speak to {RESPONDENT NAME}?

**INTRO1.** **We are conducting a short survey to find out about where SoonerCare members get their health care.  The survey takes about 10 minutes.**

[ANSWER ANY QUESTIONS AND PROCEED TO QUESTION 1]

**INTRO2.** **[If need to leave a message] We are conducting a short survey to find out about where SoonerCare members get their health care.  We can be reached toll-free at <u>1-888-941-9358</u>.**

2. SoonerCare and Insure Oklahoma are health insurance programs offered by the state.  Are you currently enrolled either in SoonerCare or Insure Oklahoma?[92]

   a. Yes, SoonerCare → [GO TO QUESTION 6]

   b. Yes, Insure Oklahoma → [GO TO QUESTION 6]

   c. No

   d. Don't Know/Not Sure → [ASK IF ENROLLED IN MEDICAID.  IF NO, END CALL]

3. The SoonerCare program also is known as Medicaid. Are you currently enrolled in the Oklahoma Medicaid program?

   a. Yes → [GO TO QUESTION 6]

   b. No

   c. Don't Know/Not Sure

4. Have you been enrolled in SoonerCare or Oklahoma Medicaid in the past?

   a. Yes

   b. No → [EXPLAIN THAT THE SURVEY IS FOR SOONERCARE MEMBERS. END CALL]

   c. Don't Know/Not Sure → [EXPLAIN THAT THE SURVEY IS FOR SOONERCARE MEMBERS. END CALL]

5. About how long ago did you disenroll?

   a. Within the past month

   b. One to three months ago

   c. Four to six months ago

   d. Seven months to one year ago

   e. More than one year ago

---

[92] All questions include a "don't know/not sure" or similar option which is unprompted by the surveyor; this response is listed on the instrument to allow surveyors to document such a response.

  f. Don't Know/Not Sure


6. Did you reapply for the program after you were disenrolled? If yes, what happened?

  a. Reapplied – waiting for determination

  b. Reapplied – approved [CONFIRM MEMBER IS NOT CURRENTLY ENROLLED]

  c. Reapplied – denied

  d. Did not reapply – had other health coverage

  e. Did not reapply – did not have other health coverage

  f. Don't Know/Not Sure


# [USUAL CARE QUESTIONS] *Red italics – baseline survey only*

These first questions ask about your own health care. Do not include care you got when you stayed overnight in a hospital. Do not include the times you went for dental care visits.


7. In the last six months *prior to your enrollment in SoonerCare (Insure Oklahoma)*, how often was it easy to get the care, tests or treatment you needed? [CAHPS 5.0H – HEALTH PLAN ADULT SURVEY]

  a. Never

  b. Sometimes

  c. Usually

  d. Always

  e. Don't Know/Not Sure


8. Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors and other doctors who specialize in one area of health care. In the last six months *prior to your enrollment in SoonerCare (Insure Oklahoma)*, did you make any appointments to see a specialist? [CAHPS 5.0H – HEALTH PLAN ADULT SURVEY]

  a. Yes

  b. No → [GO TO Q9]

  c. Don't Know/Not Sure → [GO TO Q9]

9. In the last six months *prior to your enrollment in SoonerCare (Insure Oklahoma)*, how often did you get an appointment to see a specialist as soon as you needed? [CAHPS 5.0H – HEALTH PLAN ADULT SURVEY]

   a. Never

   b. Sometimes

   c. Usually

   d. Always

   e. Don't Know/Not Sure

10. Using any number from 0 to 10, where 0 is the worst health care possible and 10 is the best health care possible, what number would you use to rate all your health care in the last six months *prior to your enrollment in SoonerCare (Insure Oklahoma)*? [CAHPS 5.0H – HEALTH PLAN ADULT SURVEY]

    RECORD NUMBER _____

11. This next question asks about your experience with your SoonerCare (Insure Oklahoma) health plan. Using any number from 0 to 10, where 0 is the worst health plan possible and 10 is the best health plan possible, what number would you use to rate your health plan? [CAHPS 5.0H – HEALTH PLAN ADULT SURVEY]

    RECORD NUMBER _____

## [HEALTH STATUS]

These next questions ask about your health.

12. Would you say that in general your health is? [BRFSS 2018]

    a. Excellent

    b. Very Good

    c. Good

    d. Fair

    e. Poor

    f. Don't Know/Not Sure

13. Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good? [BRFSS 2018]

    a. None

    b. Record Number between 1 and 30 _____

    c. Don't Know/Not Sure

14. Now thinking about your mental health, which includes stress, depression and problems with emotions, for how many days during the past 30 days was your mental health not good? [EMPHASIZE "MENTAL HEALTH" TO ENSURE DISTINCTION IS MADE] [BRFSS 2018]

    a. None

    b. Record Number between 1 and 30 _____

    c. Don't Know/Not Sure

15. In the last 12 months, how many times did you go to an emergency room to get care for yourself? [CAHPS 5.0H – HEALTH PLAN ADULT SURVEY]

    a. None

    b. 1 time

    c. 2 times

    d. 3 times

    e. 4 times

    f. 5 to 9 times

    g. 10 or more times

    h. Don't Know/Not Sure

16. Have you been hospitalized overnight in the past 12 months? Do not include an overnight stay in the emergency room [FHOSPYR, NHIS DRAFT 2018 - FAMILY]

    a. Yes

    b. No

    c. Don't Know/Not Sure

**Those are all the questions I have today. We may contact you again in the future to follow-up and learn if anything about your health care has changed. Thank you for your help.**

## 14. Retroactive Eligibility CEM Covariate Balance Tables for Survey Measures

| RETROACTIVE ELIGIBILITY ANALYSIS | All Data (pre-balancing) | | | Matched Data (post-balancing) | | |
|---|---|---|---|---|---|---|
| Retroactive Eligibility Survey Measures | Population Subject to Waiver Mean | Comparison Mean | Standardized Difference | Population Subject to Waiver Mean | Comparison Mean | Standardized Difference |
| *All Measures* | | | | | | |
| **Matching Variables** | | | | | | |
| Age | 36.960 | 34.963 | 0.195 | 37.120 | 37.120 | 0.000 |
| Gender (0 = male; 1 = female) | 0.586 | 0.810 | -0.454 | 0.642 | 0.642 | 0.000 |
| Urban/Rural (0 = urban; 1 = rural) | 0.456 | 0.469 | -0.025 | 0.448 | 0.448 | 0.000 |

## 15. Retroactive Eligibility Statistical Significance Test Results for Survey Measures

| Survey Measure | Population Subject to Waiver | Comparison Group | P-Value | Statistically Significant |
|---|---|---|---|---|
| **Self-Reported Health Status** | | | | |
| Excellent | 11.9% | 4.5% | 0.1191 | No |
| Very Good | 29.9% | 13.0% | 0.0585 | No |
| Good | 36.6% | 17.0% | 0.00215 | Yes |
| Fair | 16.2% | 51.6% | 0.0030 | Yes |
| Poor | 5.4% | 13.9% | 0.0539 | No |
| | | | | |
| **Number of ED Visits in Past 12 Months** | | | | |
| None | 68.4% | 53.7% | 0.2675 | No |
| 1 Visit | 18.6% | 17.1% | 0.8147 | No |
| 2 Visits | 5.4% | 15.3% | 0.1763 | No |
| 3 Visits | 3.8% | 5.9% | 0.4500 | No |
| 4 Visits | 1.3% | 1.7% | 0.7057 | No |
| 5 - 9 Visits | 2.0% | 4.7% | 0.1981 | No |
| 10 or More Visits | 0.4% | 1.5% | 0.2660 | No |
| | | | | |
| **Hospitalized in Past 12 Months** | | | | |
| Yes | 12.6% | 13.3% | 0.8382 | No |
| No | 87.4% | 86.7% | | |
| | | | | |
| **Not Healthy Days out of Past 30 Days** | | | | |
| Physical Health - Mean | 4.6 | 10.0 | 0.0069 | Yes |
| Mental Health - Mean | 6.2 | 12.3 | 0.0220 | Yes |